STATE OF CALIFORNIA

SENATE SELECT COMMITTEE TO INVESTIGATE PRICE MANIPULATION OF THE WHOLESALE ENERGY MARKET

HEARING RE: ISO REVIEW OF VARIOUS INVESTIGATIONS

STATE CAPITOL

ROOM 2040

SACRAMENTO, CALIFORNIA

TUESDAY, JANUARY 21, 2003 10:43 A.M.

Reported by:

Evelyn J. Mizak Shorthand Reporter

APPEARANCES

MEMBERS PRESENT

SENATOR JOSEPH DUNN, Chair

SENATOR WILLIAM MORROW, Vice Chair

SENATOR BETTY KARNETTE

SENATOR SHEILA KUEHL

SENATOR BYRON SHER

MEMBERS ABSENT

SENATOR DEBRA BOWEN

SENATOR WES CHESBRO

SENATOR MARTHA ESCUTIA

STAFF PRESENT

LARRY DRIVON, Special Counsel to Committee

BOB PRATT, Legislative Counsel

CHRIS SCHNEIDER, Investigative Consultant

SCOTT CHAVEZ, Consultant to SENATOR MORROW

WADE TEASDALE, Chief of Staff, SENATOR MORROW

ALSO PRESENT

ERIC HILDEBRANDT, Ph.D., Manager Department of Market Analysis California ISO

CHARLES F. ROBINSON, Vice President and General Counsel California ISO

JOHN POWERS, Principal Consultant McCullough Research

TRACY BIBB, Director of Scheduling California ISO

JIM DETMERS, Vice President of Grid Operations California ISO

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      P-R-O-C-E-E-D-I-N-G-S
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       - - 00000- -
                             CHAIRMAN DUNN: Good morning everybody.
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                                                                                        While
       I'm giving some introductory procedural comments, Eric, you may
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       want to wander up get and get settled in here.
                                                                       I don't think it's
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                             Happy New Year to everybody.
      too late into January yet to be saying that.

As the old saying goes, I've had numerous questions over the past two weeks, and let me just say, the rumors of our demise are greatly exaggerated, I'm sure to
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       Charlie's great dismay.
       Let me just clarify, because I know some folks still have questions about what Rules Committee did two weeks
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               The life of this Committee was extended to March 31st.
 14
       ago.
                             That is basically how we've been doing this, is
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 16
       that Rules has extended us to a certain date, and when that
 17
       certain date rolls around, reviews whether it wishes to continue
       the existence of the Investigation Committee. And that new date is March 31st. Rules Committee did say that it would like to
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       see us wrap up our work as soon as we could, with the hope being
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       March 31st. But, of course, we'll revisit the issue at that
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       time.
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                             As stated to many representatives from the media
      that have called, we've got a few loose ends we want to tie up, one or two larger areas we'd like to probe into, but obviously
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       with an investigation into this complex area, we could have five
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       more years and not cover everything that needs to be covered.
       So, we're going to do our best to prioritize and target that
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       March 31st deadline.
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                            I did make mention at the Rules Committee
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       hearing, as some may have heard or read in the press, that if we
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       still have a little work left to do by March 31st, and Rules
      Committee would prefer us not to go beyond March 31st, we may seek the permission of the Chair of Energy Committee, Senator Debra Bowen, to create a subcommittee of her Energy Committee to do the last little bit of work that may extend beyond March
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      31st. But stay tuned. We'll keep everybody posted on that.

I also want to note that a bill was put across the desk this morning, because I know I'm going to get a lot of questions on it, so let's just deal with it right out of the box. It's what I'm referring as the California De-ISO bill.
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       The bill is only a spot bill, and it relates, of course, to the
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       ongoing litigation over the governance of the Cal-ISO. That
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       bill is there for a vehicle, depending upon the outcome of that
      governance dispute that is now in litigation. I have no idea what the timing of that is. Charlie, you may have a better read on it; you may have no idea what the timing is as well. Slow
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       process. So, that is out there as well, too.
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                            Procedurally, I think that's it.
                                                                            Senator Kuehl,
      I know you've got a limited time. Any comments you wish to make as we roll into another year of our investigation?

There's several issues we intend to cover this
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 23
 24
       morning. We're going to do it as quickly as possible. I know
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       I've always said that, and Evelyn always looks at me, but we
       have a built-in deadline and that is 1:30. We've got both
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 28
       caucus meetings and Floor Session, et cetera, so that we really
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       are going to have a difficult time going beyond that point.
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       we'll try to get through it as quickly as possible.
 03
                             I think the hearing agenda is out there. Three
      main areas, and then some minor wrap up areas. The three main areas are -- Eric is here to discuss a recent report that's been discussed between the Committee and Cal-ISO.
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Page 1

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Second, what we refer to as the C66 issue. of you may be familiar with it. I'll leave it to when we get to that to go into what that's all about for those who are unfamiliar.

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Then third, some discussion regarding the fictitious load incidents, which isn't really new news. It's been publicly discussed in the past, but we want to cover it

Items Four and Five are more wrap-up or update to Perot Systems and Taipower. There was some issues relating to Perot Systems and Taipower. publicity on this one. We've asked Charlie, if time permits, to update us where we sit on the Perot Systems-Taipower situation.

And then lastly, the MDO2 up date, and a few issues relating to that. I know CMUA is, if we have the time permitting, I'm going to invite to make some comments on that as well as others.

So, without anything further, we're going to get going because I don't anticipate that we're going to have any votes today. I don't think we'll have to vote on contempt on Eric or Charlie, or anybody else here. So, I think we're going to go, even though we do not have a quorum at this point in time.

Let's go forward. Eric, if you would. I think everybody in the audience knows, but obviously the introduction, we're going to have to swear you in, as we do with all of them, and then let's roll right into the presentation of your report.

[Thereupon the witness, ERIC HILDEBRANDT, swore to tell the truth, the whole truth, and nothing but the truth.]
CHAIRMAN DUNN: If you would, Eric.
DR. HILDEBRANDT: Good morning, Senator.

you again for the opportunity to appear once again before the Committee and review some of the work I've done pertinent to your investigation. Certainly happy to review that work and entertain any other questions you may have about that.

My understanding is that primarily you're

interested in an October 4th report that was released by the ISO and provided to various legal and regulatory entities in which we examined the potential impacts and magnitude of the various strategies outlined in the Enron memos released last spring.

The purpose of the report was really two-fold. First, ISO management, a lot of external entities, clearly when the Enron memos came out, wanted an assessment of the degree to which these were exercised: Was it only Enron? Were there other participants potentially involved in these?
So, the first objective was to assess the

potential magnitude in terms of impact and scope of the strategies.

The second objective, clearly in my mind, was in

the course of doing that analysis, I would be developing lists of transaction or schedule-specific information that might be used by various entities that we were working with and would continue to work with who are investigating the Enron strategies.

So, those were the two purposes of the report. Because, again, the objective was to assess the potential magnitude and provide leads, so to speak, or flag transactions that might be further investigated, the report casts a broad net, clearly, in terms of looking at the Enron strategies, identifying how that would appear in ISO records, and then proceeding to flag all the records that kind of meet those criteria and kind of trigger a flag, which suggests, well they could be involved in one of the Enron strategies.

 So again, the report casts a broad net, and that's consistent with, you know, wanting to try to capture the upper bound of some of these and provide a starting point for further analysis.

I guess I would note as a global comment, in going through each of the strategies, I think in every case it turned out we, the ISO, didn't have the entire, you know, the complete set of information that would be necessary for me to draw a conclusion as to whether specific transactions, you know, were indeed the result of Enron strategies and the strategies outlined in those memos. So again, that was another reason for emphasizing the need for further investigation.

emphasizing the need for further investigation.

Let's see, I could go through each individual one, but I think that's kind of the global methodology, taking

them one by one, assessing the magnitude as well as the data underlying them.

I guess I would emphasize, you know, when you look in terms of results, we did come up, I think, with tens of millions of dollars in terms of potential impacts.

I would emphasize, however, that, you know, while we intentionally cast a broad net, we don't know what we don't know. A lot of the strategies involve -- appear, based on the Enron memos, intentional misinformation or scheduling to hide, you know, the strategy being undertaken. So, we don't know what we don't know.

So again as a caveat, clearly we don't know to the extent the same strategies were employed but don't show up in the ISO data, or only in other records we don't have access to. I certainly don't want to discourage investigation of that. In fact, it's our understanding -- and we're working with various entities, looking at all the different sources of information, typically or most notably, information from the suppliers themselves.

CHAIRMAN DUNN: Can I interrupt for one second.

One of the statements you made, difficult to research these issues as times because of, I believe you used the words, deliberate misinformation efforts by certain market participants to try to cover the behavior.

Can you give us some examples of that kind of misinformation or attempt to cover the behavior?

DR. HILDEBRANDT: Well, attempt to cover may not be the proper word, just going down the list.

If somebody -- going down the list, if somebody overschedules load, you know, you can't always tell the degree to which that's intentional versus unintentional. One can make some assumptions. We don't have evidence of intent, except perhaps the degree of overscheduling.

I think a big one is, you know, to the extent resources schedules, whether it's a counter-flow schedule or an ancillary service schedule, was submitted and could not have been backed by an actual resource, we don't know that. So, that would be one, one instance there.

Or another instance would be to the extent schedules and resources were not physically available, we have no way after the fact particularly to go back and determine that.

I think, again, and some of the -- for instance, the Death Star strategy, clearly, if that's -- whether intentional or not, whether it's employed under different schedule coordinator IDs, that becomes difficult, if not impossible, for us to match up and link with certainty.

CHAIRMAN DUNN: Okay.

Mr. Dri von. 22 MR. DRIVON: 23 24 25 26 the ISO control area?

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Thank you. Dr. Hildebrandt, to what extent, if at all, do the confidentiality requirements of tariffs interfere with your ability to gather data as may be represented in areas outside

For instance, on Page Five of the Yoder-Hall memoranda, Enron talks about how it may be difficult for the ISO $\,$

to understand what's going on because you can only see half the picture. Certain of these tariffs, as I understand it, require and mandate confidentiality with respect to certain data.

I wondered whether that might have an impact on

your ability to see the picture in real time?

DR. HILDEBRANDT: Information that we don't normally collect, I think the bigger barrier is not -- or I haven't considered the confidentiality of the data that other entities, data filed with other entities.

I would just note, the biggest barrier for the ISO is, we don't have subpoen power. We have the ability to request information currently, but -- and we've done that in various instances, but in the end, it's -- FERC has not enforced or taken any action. You know, our ability to request information is only as strong as FERC's willingness to back us up, and they haven't done that.

So, I think the biggest barrier is, again, we

can't subpoena entities. They typically would not or have not been responsive, you know, voluntarily.

And I guess I can't address to the extent which they may be limited in providing us information because of

various confidentiality agreements.

MR. DRIVON: Well, o Well, do you believe, for instance, that more transparency in the market across control areas might help your effort in understanding what's going on and being able to pick these issues up in real time?

DR. HILDEBRANDT: They would help our ability as well as other entities' abilities to do that, yes.

MR. DRIVON: So, to the extent that the information is obscure, it aids someone other than the control operator in whatever area they're in. Would that be a fair statement?

DR. HILDEBRANDT: Well, certainly it hinders the control operator. In theory I guess it could help facilitate the various games.

MR. DRIVON: In practice, Enron was saying internally that one of the reasons they could get by with certain of those congestion games they were playing was because there was a lack of transparency in the market. You could only see part of it.

So, how do we fix that?

DR. HILDEBRANDT: Well, clearly one thing that would help is the one you mentioned, more transparency on a regional scale of entities which could then be, you know, observed or monitored by the various entities responsible for that.

MR. ROBINSON: My name is Charles Robinson. Vice President and General Counsel on the California ISO. Your question, I think, began with questions about the confidentiality provisions of the ISO tariff. And I

did want to make sure that Eric's response was clear, that what he was saying was, there was a lack of information with respect to control areas outside of the ISO, and so to some extent, your question about transparency relates to transparency across an entire regional market, not simply the ISO market.

01-21-03. TXT MR. DRIVON: I have a general concern with 28 0010 confidentiality, as you know. There have been a lot of instances in the last nearly two years that I' ve been here with 01 02 the Committee where confidentiality as urged by various 03 entities, not certainly limited to the ISO but not excluding 04 them either, have made it more difficult for a lot of us to 05 understand what's going on.

And that's confidentiality from market 06 07 08 participants, from other control -- for instance, what about a requirement that -- let's just be specific, LADWP share information with the ISO; the ISO share information with LADWP. 09 10 Everybody share information with other control areas.

And by the way, when we're trying to understand what's going on, you know, it's helpful when we get information, if we can share it with other people who can help us understand 11 12 13 14 15 So, I think what I'm trying to point out is that 16 there is a general problem from my perspective, at least, as an investigator in this thing, with respect to the level of obscurity in the entire market, starting from the FERC and going 17 18 19 all the way to the bottom of it. 21 And I personally believe that that, together with the interpretations of confidentiality requirements that have been made by entities such as the ISO, have made things a lot 22 23 more difficult and allowed gaming to continue longer than it 24 needed to if all of the information had been out there and 25 26 everybody had been able to point fingers at everybody else with 27 information. 28 MR. ROBINSON: I would agree with the general 0011 01 thrust of your comments. Some of those issues are being 02 addressed. For example, in our Oversight and Investigation Program, that is going to the Board later this week.

Part of our effort is to make sure that we push 03 04 05 information out, and we share it with oversight and investigative agencies on a more real-time basis. 06 In addition to that, there is substantial 07 activity going on currently regionally to develop market 80 09 monitoring programs on a regional basis. So, I agree with the general thrust of your 10 11 comments, and there are activities underway to address the concerns that you've raised. 12 13 MR. DRIVON: And I applaud the fact that are 14 activities underway. 15 My question would be whether it was a management 16 decision that caused these activities to have been delayed for 17 nearly two years? 18 I mean, we've known about the problems with respect to obscurity in the market for a long time, even before 19 20 this Committee got started. There were a lot of people that were screaming about the fact that there wasn't enough 21 22

transparency to the market.

So why is it that you are now getting around to the place of addressing that from a management perspective?

CHAIRMAN DUNN: It may have been rhetorical,
Charlie. I'll leave it up to you, if you want to answer it.

MR. ROBINSON: Why don't we proceed.

CHAIRMAN DUNN: Eric, a couple questions.

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First of all, you were doing a general overview and I interrupted you initially. Why don't you finish that.

DR. HILDEBRANDT: Yeah, I guess I did a general overview. I was kind of summing up some of the results really.

Then I'm willing to go, at the pleasure of the

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Committee, I can go through individually each of them.
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                           But should we not do that, just in terms of
      summing up, again, I guess I couldn't emphasize enough that we don't know what we don't know. We don't want to discourage other investigations. In fact, that was one of the key purposes
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      of the report, was to provide if not starting point, at least a
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      valuable resource that we could use to contribute to the
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      investigations going on.
      I continue to devote a significant amount of my time to assisting the entities involved in different
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      investigations and will continue to do that.
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                           So, I guess that would be summation. I could go
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      through the strategies one by one, or perhaps do that through
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      questi ons.
                           CHAIRMAN DUNN: Probably we'll touch upon it in
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 21
      questi ons.
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                           Eric, I want to make sure I understand, because I
      know that Chris has been doing most of the handling of putting
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      the procedural aspects of today together.
Your report now of October 4th, '02, while
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      initially confidential, I believe confidentiality has been
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      wai ved now.
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                           Is that correct, Charlie?
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                           MR. ROBINSON: That's correct.
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                           CHAIRMAN DUNN: So now available to the public at
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      large?
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                           MR. ROBINSON:
                                               That's right.
                           CHAIRMAN DUNN: Do you remember approximately
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 06
      when it was made available to the public at large? Just a rough
                I'm not trying to pin you on a date.

MR. ROBINSON: The Monday -- rough guess is
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      Monday, January 6th or 7th.
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                           DR. HILDEBRANDT: The 7th.
                           CHAIRMAN DUNN: Eric, when did you first start
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      working to put this report together, again, rough approximation?

DR. HILDEBRANDT: Well, various parts of it as soon as the Enron memos were released. You know, the immediate
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      questions came down through management, you know, to begin assessing the degree to which these were employed in our
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                    So, the spring, certainly the spring.
CHAIRMAN DUNN: Enron was May of
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      markets.
                                                Enron was May of last year, I
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      believe, that the memos were released.
DR. HILDEBRANDT: Yeah.
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                           CHAIRMAN DUNN: Or approximately.

DR. HILDEBRANDT: And I should note that, you
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      know, some of the initial results were reported in Terry
Winters' testimony before Congress. That was one of the driving
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      -- well, kind of where some of the results began to get released
      publicly was in his testimony, which he was being asked
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      questions about the degree and magnitude of these different
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      strategies.
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                           We continued to work on those, because a number
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      of these are certainly complex, and we need to juggle sort of
 03
      this investigation with other activities. We continued on up
      until October and continued after that point, as we do today.

Another driver, I guess, has been to be able to produce updated results and data for various hearings that are
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                    There's three hearings currently at FERC which are
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      investigating manipulation, potential gaming by not only Enron
      but all other entities. They're basically offshoots of the refund hearings. So, I guess that would be another driver, was to be able to provide some of the data in those proceedings, and again see it be utilized there and combined with other
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01-21-03. TXT 13 information in that forum. 14 CHAIRMAN DUNN: A couple questions. First, do you consider your findings in here as preliminary, or would you label them more final?

DR. HILDEBRANDT: Um, by and large, final in 15 16 17 18 terms of what they are, which is looking at data, casting a broad net, identifying criteria, and flagging transactions that 19 20 merit further investigation. In terms of the overall investigation, no. I think it's, you know, just begun. And again, the next point or 21 22 23 the next step is to combine this with additional information 24 typically, I believe, could only be obtained from suppliers. 25 And typically only in a procedure where they would be compelled 26 to provide that information. CHAIRMAN DUNN: 27 To the extent that Counsel will allow you, can you share with the Committee where you're going 28 0015 from this point, referring to the October 4th memorandum with 01 02 respect to further investigation on strategies that were employed in the market, example, the Enron memos?

DR. HILDEBRANDT: I think there's -- well, 03 04 there's three FERC hearings. I would describe the role as 05 assisting, providing data, consultation, et cetera, to any of 06 the entities involved in a regulatory proceeding or legal investigation of any of these strategies.

And I think I'm not at liberty to say all the 07 08 09 10 entities, perhaps, that I would provide that assistance and data to. The three FERC ones I can certainly mention. 11 So, I think the next step is to continue to devote a significant amount of my time to providing those entities, providing additional data. To the extent we can do additional analysis to do that, and pass it on to them.

CHAIRMAN DUNN: You mention that the work, 12 13 14 15 16 bringing together the data that's contained in the October 4th 17 18 report, was commenced shortly after the release of the Enron memos of last year; correct? DR. HILDEBRANDT: 19 20 Correct. CHAIRMAN DUNN: It's my understanding, Eric, that 21 22 ISO staff was aware of some of those strategies prior to the Enron memos being made public; correct?
DR. HILDEBRANDT: I beli 23 24 I believe so. Why didn't ISO commence such an 25 CHAIRMAN DUNN: investigation regarding those strategies until after the Enron 26 memos release, if in fact ISO staff knew of the existence of at least some of those strategies beforehand? 27 28 0016 DR. HILDEBRANDT: I can't speak to all of the strategies and the extent to which ISO staff, meaning anybody at the ISO -- I work in one department, and so I can't speak to 01 02 03 04 that. 05 Let's see. I'm trying to think of the ones that 06 I'm aware of. I think certainly some of them, the ISO took 07 08 steps to -- when they were identified, to address it through a 09 market design change 10 CHAİRMAN DUNN: Let me interrupt right there. Which is something we've talked about, pardon the 11 editorial, ad nauseam over the course of our hearings.

But in an attempt to address the identified 12 13 strategy, ISO never investigated prior to this report the extent 14 of such identified strategies? 15

CHAIRMAN DUNN: Obviously no surprise to you,

DR. HI LDEBRANDT:

and I'm trying to go through them in my mind. Not to my

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knowl edge.

I can't make a global comment,

Eric, from my perspective that's disconcerting in the sense that understanding that ISO tried to employ, I'll label them counter strategies, when it detected certain behaviors in the market, but at no time until the Enron memos were made publicly available did ISO seek to determine the extent at which certain strategies were being employed in the market?

DR. HILDEBRANDT: Well, I'd qualify that, in that

DR. HĬLDEBRANDT: Well, I'd qualify that, in that a formal -- you know, there's not a formal report on all of these. I think certainly the operations people, or various

folks involved certainly would be able to look at the extent of this informally. There's no formal report written up about any of that.

You know, especially during the summer of 2000, it was quite chaotic. People were focused on a number of issues, I think primarily the billion dollar issue, you know, reliability, and the billion dollar issues of market power.

So, I think a lot of the work, to the degree in which these were assessed less formally, and that that was factored into the decision of what to do, just simply is not documented or was not retained.

CHAIRMAN DUNN: Charlie.

MR. ROBINSON: I did want to try to place this in

some context.

You understand from start up there have been a number of trading strategies, a number of market defects that needed to be addressed. The Enron strategies, as outlined in the memo, received a great deal of attention, but of course they're not the only strategies that the ISO has come across, and they're not the only ones that we've addressed.

and they're not the only ones that we've addressed.

As Eric has indicated, we've had a very great concern for quite a while about market power, and a considerable amount of attention and resources were devoted to trying to document the exercise of market power to get changes made at FERC with respect to market power and, frankly, to support the refund effort.

So, I just want to make sure that there's a context in which people understand how we addressed ten specific

strategies versus, more than likely, hundreds that DMA has come across since 1998, the 48 tariff amendments that we've made to correct various market defects, a tremendous amount of effort around a variety of issues. I didn't want the Committee to lose sight of that context.

CHAIRMAN DUNN: Understood, Charlie.

A couple quick things here. First of all, I want to, while we've got a little interruption here, welcome Senator Morrow, Senator Karnette, and Senator Sher, as we go back at another year of our investigation.

Would it be difficult, either to Charlie or to Eric, for us lay people still trying to understand, for ISO, someone at ISO, to make a list of the strategies that have been identified since the opening of the market that ISO felt it was necessary to respond to? I'm not suggesting it was untold conduct, but just strategies that it detected in the market that it felt it had to respond to.

Would that be a difficult task to do?

DR. HILDEBRANDT: One, I think to a large extent that's been done. It just depends what level of granularity you want to go down to. And I think the most complete would be Exhibit Two, the Terry Winters testimony. I know a comprehensive effort was made to list all the actions the ISO had taken to the various --

CHAIRMAN DUNN: Terry's testimony in D.C.? DR. HILDEBRANDT: Yes.

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                              MR. ROBINSON: I think that probably is only part
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       of the picture, though. My recollection is, it didn't contain
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       every tariff amendment that we engaged in, and virtually every
       tariff amendment designed to address something that we saw in
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       our market rules or some activity in the market that we believed
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       needed to be addressed.
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                              So, I think the testimony that Terry submitted in
       Washington, together with some sort of comprehensive review of all of our amendments and all the Board documents that went
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       along with the amendments could yield the type of information
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       that you're talking about now.

And frankly, I don't know how long an effort or how involved an effort that would be.

DR. HILDEBRANDT: If I may comment, if after
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       reviewing the Exhibit Two, additional information is necessary,
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       I assume that could be put together.
                              I would respectfully suggest that to the extent
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       folks like me would need to do that, it would detract resources from ongoing investigations, market design issues, et cetera,
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       and other activities
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                              CHAIRMAN DUNN: We understand.
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                              Again, a couple follow-ups here.
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       October 4th, Eric, where was it first submitted outside the ISO? What non-ISO entity or person was the first to receive your
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       October 4th memo?
      DR. HILDEBRANDT: I think simultaneously it was provided to your Committee, FERC, the AG, EOB.

MR. ROBINSON: The PUC, the US Attorney's Office.
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                              CHAIRMAN DUNN: It was shortly after the
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       completion of the report.
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                              MR. ROBINSON: That's my understanding.
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                              DR. HILDEBRANDT: More or less simultaneously. CHAIRMAN DUNN: I want to go back, do just a
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      little follow-up on my question of what additional work needs to be done? You mentioned about continuing to work with the three proceedings in front of FERC, et cetera.
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                              What else data-wise, knowing you're speaking to
      lay people here, do you feel you need to come to a thorough understanding, not necessarily of the strategies employed, but the extent of the strategies employed?

DR. HILDEBRANDT: I guess data-wise, the way I
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      envisioned proceeding was starting with the list of transactions identified, perhaps using some judgment in identifying those that might be -- you might want -- because of the mass, the tremendous volume of transactions, you may want to, you know, focus on certain transactions or entities. I think asking them
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       to provide specific information about the specific transactions as to the source of the energy, et cetera, the source of the
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       schedul e.
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                              So, one thing is asking for specific responses to
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       trading and scheduling records, you know, for the days and the
       markets in which the transactions occurred.
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                              I think that has to be combined with depositions
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       of the people involved in those because, again, the information,
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       or that which is supplied, may not -- would only be a piece of
       the puzzle. So, I think depositions and more general documents, maybe, that don't pertain to a specific transaction, but more
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       general internal company documents that outline trading
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strategies, agreements with other entities, et cetera.

CHAIRMAN DUNN: Two other areas for me, and I'll

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03 04 then open it up to any other questions from Committee Members.

DR. HILDEBRANDT: And just the other comment is,

that's tremendously resource intensive. So, I think you're asking what would I do. So, in addition to data, a tremendous amount of resources would be necessary to do that, legal as well as analytical.

CHAIRMAN DUNN: Understood.

Senator Sher.

SENATOR SHER: Mr. Chairman, maybe you discussed this before I came in, but what would be the objective of obtaining that information? Would it be for this Committee?

CHAIRMAN DUNN: No, I'm sorry.

The question that I posed to Eric was, we had talked earlier about his October 4th memo, which you have in your binders, and whether it was preliminary or final in his perspective And a little bit of both, I think, was the answer.

And I was trying to query what additional work he

would like to do to come to more definitive conclusions about the extent of the strategies identified in the market, not suggesting that this Committee necessarily has the wherewithal to be able to do that work. It was really what he intends to do in the future, Senator Sher.

DR. HILDEBRANDT: One more comment on that, I guess, would be just procedurally the first step might be, one might be simply to ask every entity, you know, involved in every

transaction to respond.

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You know, clearly I think -- and maybe perhaps take it from there in terms -- based on the initial responses. Do more targeted investigation based on that.

Just a comment. I fully expect that, you know, a great number of entities would be able to explain to everyone's satisfaction as to, you know, that some of the schedules, you know, were not -- didn't involve any of the Enron strategies.

CHAIRMAN DUNN: Have you had the opportunity, Eric, to review the interrogatory responses that this Committee got from many other market participants when we followed up the

public release of the Enron documents, asking strategy-by-strategy, whether in fact that market participant

had engaged in similar behavior?

DR. HI LDEBRANDT: No, I have not. that I have -- I reviewed most of those submitted to FERC. believe they did a similar request. I didn't know that any others were publicly available. I did review those submitted to FERC.

CHAIRMAN DUNN: I think most of them tracked the responses to FERC. We will provide one to you. They're relatively brief answers. For most of them it's "No, no, no,

no, no, no, "all the way down the line.

My reading of your report suggests that at least from the ISO perspective, those answers may not be correct.

DR. HILDEBRANDT: Certainly they merit additional

investigation.

CHAIRMAN DUNN: A very tactful way of putting that, Eric.

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> Let me put it in lay terms. From your examination of data, it is your belief at ISO that other market participants did engage in behavior similar to that described in the Enron memos.

DR. HILDEBRANDT: Yeah. My personal belief is, yeah. Certainly other participants employed one or more of the strategies.

Just a comment on some of the responses. I guess their lawyers did a good job interpreting the questions very, very narrowly, stating they were responding, you know, exactly what was in the Enron memos. I guess in theory --

CHAIRMAN DUNN: That's why we put in the word

"similar."

DR. HILDEBRANDT: Yeah. And to the best of their knowledge, and all that, and so I think by doing that, they, you know, would -- some of what we identified they would arrange the some of their some o

not, you know, the Enron strategy that they were responding to.

CHAIRMAN DUNN: That's why we're going to enjoy the hearing when they come and answer why they answered no to those questions, Eric. I agree with you, that that's probably what occurred, the lawyers strike again.

One last question. When the document was completed, October 4th, and you identified generally who simultaneously received copies of it, including our Committee, but for public purposes, the document was confidential until just recently; correct?

And Charlie, I welcome your input here on this. MR. ROBINSON: Yes, that's correct.

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CHAIRMAN DUNN: Why? And before you answer, let

me explain.

The Enron memos, of course, were put on the FERC website with great fanfare, and a lot of public examination relating to those issues occurred immediately thereafter and throughout the summer.

At least from my perspective, Charlie, and looking at the fact that this report was initially kept confidential, it's mind-boggling to me that that was done, the reason ISO kept it confidential.

0kay. MR. ROBINSON: The decision to keep it confidential was my decision. And when I receive reports of this type, I determine on a case-by-case basis whether or not we will publish the report.

I would like to emphasize that the report was not It was given to half a dozen investigative kept secret. agencies and twice to this Committee, in October and in December or January. So, it was not kept secret.

Case-by-case determination, I look at things such as whether or not we've been able to draw any firm conclusions; whether or not -- or how comfortable we are with the assumptions that went into the report; whether there is ongoing litigation; whether there are ongoing investigations that may be undermined by the release of the report.

And looking at all of those factors, and given

what I understood from Eric to be in the report and the objective of the report, I concluded that we should provide it to the investigative agencies at this time. And again, I need

0025 01 to emphasize that what we decided was not to make it publicly available at that time.

That was not a decision never to make it publicly available. We decided not to make it available at that time largely in order to allow additional work to be done by the investigative agencies.

I think one thing that also needs to be kept in mind is that to the extent that the report is preliminary, or conclusions cannot be formed, then information in the report might undercut or undermine any claims that might be asserted

against suppliers later on.

If, for example, we underestimated the extent of the Enron strategies, then publishing it, and then later on coming out with a different set of numbers may very well undermine claims that investigative authorities or the ISO might

wish to assert against suppliers.

CHAIRMAN DUNN: I'm curious, Charlie. In looking at Eric's report, it's based upon data from the past that ISO

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It's not, at least from my
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      has within its possession.
      observation, an area subject to depending upon accurate information today from any of the market participants. The information's already there. It's just a matter of the rather large task of examining the data to determine the extent of the
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      strategies.
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                           In addition, when you couple that with knowing
      that other market participants were responding to both FERC interrogatories and our interrogatories, denying that they engaged in behavior similar to that described in the Enron
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      memos, that it struck me as odd, including in reviewing the
      formulas or bases that you identify, how the conclusion could
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      have been drawn to maintain confidentiality from the public at
      large with respect to this particular document.
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                           MR. ROBINSON:
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                                                 Well -
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                           CHAIRMAN DUNN:
                                                Senator Sher.
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                                               The introduction to the report
                           SENATOR SHER:
      talks about submitting this report to commission staff.
Which commission is that?
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                           MR. ROBINSON: The Federal Energy Regulatory
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      Commission.
                           SENATOR SHER: Did they request this report?
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      They requested you to do this? DR. HILDEBRANDT:
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                                                   We did receive a -- after the
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      Enron memos came out, actually, I think, simultaneously with
      their interrogatories to all market participants, they issued
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      one at the ISO for any and all work done.
      SENATOR SHER: So, this was kind of a self-generated report, not specifically requested by FERC?

DR. HILDEBRANDT: The report, as I explained, was
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      done at the request of management in response to -- for its own
      information.
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      We were then asked by FERC to provide any and all information we had done regarding it. So, I considered it --
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                           SENATOR SHER: They didn't ask for
      confidentiality, FERC, did they?
DR. HILDEBRANDT:
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                                                   I think what we provide to them
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      is typically under confidentiality.
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      SENATOR SHER: The way the introductory paragraph reads, it appears that this report is being submitted to
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      Commission staff at their -- normally that would be at their
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      request.
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                           DR. HILDEBRANDT: Yeah, it did.
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                           SENATOR SHER: They requested you to do the
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      report.
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                           DR. HILDEBRANDT: They requested us to submit any
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      and all -- again, no, they did not request this --
                           SENATOR SHER: This is an analysis, as the
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      Chairman says, of the existing data.
      But they requested you to analyze that and put it together in this kind of a format?

MR. ROBINSON: Senator Sher, I think what
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      happened was that the analysis was initiated at the request of
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      management, but then FERC requested that we make available to
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      them --
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                           SENATOR SHER: After they knew that you were
      doing it. So actually, the report was done at the instance of the management of the ISO; is that right?

MR. ROBINSON: The analysis was undertaken at the
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                                      The report, the written report --
      request of management.
      SENATOR SHER: Management being the Board of ISO?
MR. ROBINSON: Management in this particular instance, I believe, was the CEO and the General Counsel, and
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26 other management. 27

SENATOR SHER: I'm looking for whether anyone would have requested confidentiality, or was that --

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MR. ROBINSON: I can respond to that directly. No one requested confidentiality with this particular report. I looked at the factors that I just described. And given what I knew about what went into the report, which I'd like to describe, my understanding of what Eric did in this report was to try to come up with the outside ballpark figure on what the impact of the Enron strategies might have been.

And the way that he went about doing this was determining under what system conditions someone would have been able to employ these strategies, and then looking at bidding patterns and saying, what bidding patterns might be consistent with an Enron strategy. And then he put a number on it.

So, as he indicated before, he cast a very broad net. And then he indicated, but there's a whole lot of additional work that needs to be done. We don't have subpoena power. We don't have the investigative resources to do this. Let's turn this over to investigative authorities and allow them to proceed from here. Let them use the report essentially as a road map for how they prioritize their investigation and where they go from here.

So on that basis, I concluded let's not publish the report right now. Let's make sure we get the information out to the investigative authorities.

SENATOR SHER: So, the CEO asked that this report The report was done. You saw it, and you made the be done. decision to submit it in the form that it was received but to keep it confidential for the reasons you just stated.

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26 27 Is that right?

MR. ROBINSON: That's right.

The one correction, as I sit here now, I don't remember whether or not the request came directly from the CEO, whether I thought of it, or someone else in management thought of it. So, I didn't -- I wanted to make that clear. It came from somewhere in management.

CHAIRMAN DUNN: Mr. Dri von.

MR. DRIVON: My question is, you just said that the design of the report was to identify the, I believe you said, outside ballpark of what may have occurred in terms of the impact.

MR. ROBINSON: That's right. That was my

 $\begin{array}{c} \text{understanding at the time.} \\ \text{MR. DRIVON:} \end{array}$ My question is, how can you determine an outside ballpark when you don't know what the fences are?

For instance, on Page Nine of Dr. Hildebrandt's report, in discussing an analysis of Death Star, he indicates that,

a review of a sample of NERC tags indicates that in many if not most cases, there is not sufficient information for the ISO to make this

 $\begin{array}{c} \text{determination"} \\ \text{MR. ROBINSON: That's precisely one of the} \\ \text{reasons why I decided that it wouldn't be appropriate -- or I} \end{array}$

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decided not to release the report publicly at the time, because there was additional information required that needed to be followed up by those who have the authority and the tools to

04 undertake the investigation.

 $\begin{array}{c} 0031 \\ 01 \end{array}$

MR. DRIVON: Well, if the design of the report was to identify the outside ballpark, and information was not available, then I guess the report didn't meet the criteria of its design.

DR. HILDEBRANDT: If I could address that, I think I'm the author of the comments about what the report was designed to do.

You know, recall in my summary, I think I emphasized twice, we don't know what we don't know. And I said to the extent -- to the extent we could devise a methodology to use ISO records to identify, flag transactions that would, you know, give an indication of the magnitude of that and would provide a basis for further investigation, we did that. In that sense, the report is conservative, i.e., you know, it casts a broad net.

But we don't know what we don't know. Some of these strategies, you know, it's difficult, impossible to just start taking records and identify, you know, those that might be part of the strategy, or what the market impacts were.

So, where the report doesn't address something, you know, clearly that's not encompassed in the report. And there's some of these that I think could only be addressed through other information.

And then you might, you know, get ten different

economists to assess the impacts. And you'd get probably ten different answers with a range.

So, I guess I didn't want to, you know, and that would take a significant amount of time. So I think some basically were not -- were, you know, the limits of analysis were clearly laid out in the report so people could see we weren't drawing conclusions in terms of their -- any dollar impact, et cetera.

MR. DRIVON: Actually, I just wanted to be sure that the record got clear on that point. I understood your testimony, but I didn't want to let Counsel's comments go unchallenged, at least somebody pick up the record and say that your report set the outside parameters of the ballpark that was identified. So, I think we all understand where we are on that now.

MR. ROBINSON: Well, I think what I meant by that, and again, it's based on my understanding from speaking to Eric, he identified certain system conditions or circumstances under which a strategy of that type could have been employed.

So, to that extent, it puts a boundary around the outside impact. In other words, that's what I meant when I said an outside boundary.

He looked at system conditions. He looked at bidding patterns. And based on that he was able to say, beyond that, it's unlikely that such a strategy was employed or that revenue would have been derived from one of these strategies.

MR. DRIVON: The bottom line is, the report has

28 identified tens of millions of dollars of gains that were gotten 0032

through gaming in these specific sorts of instances. And that's based only on whatever incomplete data there was to support those numbers; correct?

DR. HILDEBRANDT: I would just insert, the word potential gains, I think, is used throughout the report. Again, to the extent we cast a broad net, you know, we would identify the potential gains and then, based on further investigation, would determine the portion of those that would be attributable to gaming.

MR. DRIVON: Another question on confidentiality.

Has there been a review recently of the continuing need to maintain confidentiality over previously confidential portions of reports that were written? I have in mind Dr. Sheffrin's reports that were submitted a year or two ago.

CHAIRMAN DUNN: Who, by the way, is here.

Anjali, good to see you.

She's hiding behind the screen from you, Larry, in case you're wondering. She's upset that you've now noted her presence.

MR. DRIVON: I don't know why she would want to sit behind the screen.

But whether any review of the need for further maintenance of confidentiality of those sorts of data has been undertaken, and when we can expect that we can either get that information or be allowed to release it, to the extent that we have it.

MR. ROBINSON: I'm trying to recall this. believe with respect to that report, they were published, some

of the results were published in the press.

I don't know the extent to which the report still being maintained by the ISO as confidential, but I think it's

pretty broadly out in the public domain at this point.

The direct answer to your question about whether or not we've undertaken a comprehensive review of reports previously held as confidential to determine whether or not we

should change the designation, the answer is no.

CHAIRMAN DUNN: Eric, I want to ask you the

following.

We touched upon before the fact that this Committee received sworn answers to interrogatories about whether other market participants participated in the conduct described in the Enron memos. I want to touch upon about six of them very quickly. Yes or no answer to the following question for each of them.

Based upon your analysis, is it your opinion that these companies engaged in conduct in the California wholesale energy market similar to that described in the Enron memos? I

just want to touch upon about five or six of them, AES?

DR. HILDEBRANDT: With all due respect, Senator, I just -- I wouldn't feel comfortable making conclusions on that on the record here in the absence of additional information.

CHAIRMAN DUNN: Eric, you've already done it. It's in your report. You've identified that other market participants engaged in the Enron conduct.

DR. HILDEBRANDT: If you could draw my attention to where --

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CHAIRMAN DUNN: Do you disagree, Eric, that others engaged in conduct similar to the Enron memos?

DR. HILDEBRANDT: Okay, do I think at least some others, you know, do I think some of these entities and some of these transactions, I firmly believe that. I can't point -- I just simply can't point to specific ones and say, at this point, you know, I think those -- this guy did and this guy didn't.

You know, I think that's a question, you know, I'm willing to assist in the next steps to do that. I think other entities have information.

I think in the end, some of these, you know,

certainly some entities, I think, we'll be able to show that they, you know, engaged in similar practices. Some I think have basically admitted it in some of their -- they admit, you know, they explain, sure, we overscheduled loads; sure, we, you know, sometimes did this or that.

CHAIRMAN DUNN: Not in our interrogatory answers,

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                       DR. HILDEBRANDT: So, some in the FERC, I
     believe, did.
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                       CHAIRMAN DUNN: Let me restate the question.
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     trying to draw upon my old lawyer skills.
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                       Is it your opinion, Eric, as you sit here today
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     that you don't know who else in the market may have engaged in
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     Enron-style activity?
     DR. HILDEBRANDT: Um, I would -- I guess I would suggest, just as a monitor, if you look at some of these, you do
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     see various entities routinely show up.
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                       CHAIRMAN DUNN: Who? DR. HILDEBRANDT: Well, I'll let the readers do
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     that correlation themselves.
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                       CHAIRMAN DUNN:
                                         I think your Counsel was even
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     uncomfortable with that answer.
                       MR. ROBINSON:
                                        You can assist the Senator to the
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      extent that you can.
                       CHAIRMAN DUNN: Counsel, thank you.
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                       I know you don't want to, Eric.
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                       DR. HILDEBRANDT: Yeah, I just -- I don't -- I
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      don't think I can say that.
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     $M\!R$. ROBINSON: I think his question is, are there any who routinely show up? I think that's a factual question.
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     You can probably respond to it. DR. HILDEBRANDT:
 15
                                            Okay, yeah. I mean, I can stop
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     and go through here, and look at -
                       MR. DRIVON:
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                                      For instance, who is Coral Power?
                       DR. HILDEBRANDT: They're a subsidiary of Shell,
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     I think.
                 They're a schedule coordinator, marketer.
                       MR. DRIVON: They show up more than once, I
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     thi nk.
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23
                       DR. HI LDEBRANDT: Yes.
                       MR. DRIVON: In fact, they show up approximately
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     all the time.
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                       DR. HI LDEBRANDT:
                                           Correct.
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                       MR. DRIVON: At the top.
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                       DR. HILDEBRANDT: Or near, correct.
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                       MR. DRIVON: And they're part of, you think,
0036
     Shell?
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                       DR. HILDEBRANDT: I believe they're a subsidiary
     of one of the oil companies.
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                       MR. DRĪ VON:
                                     And do they have generation in
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     Cal i forni a?
                       DR. HI LDEBRANDT: MR. DRI VON: Do
                                      NDT: No, they're a marketer.
Do they have load in California?
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                       DR. HILDEBRANDT: I don't believe so.
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 09
                                     So they're traders.
                       MR. DRIVON:
                       DR. HILDEBRANDT: Traders, t-r-a-d-e-r-s.
MR. DRIVON: There's no "i" in there, or maybe
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     there is, but not.
                       DR. HI LDEBRANDT:
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                                            Traders, marketers, actually
                        Enron did have some load, but yeah, they're
      akin to Enron.
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 15
     primarily a marketer.
                               They may have a tiny bit of load.
                    I'm not sure.
 16
     don't know.
     MR. DRIVON: Having a tiny bit of load kind of helps out if you want to do some of these kinds of activities; doesn't it? I mean, Enron used the fact that it had some load
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     in California to enable it to create certain schedules,
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     instance; right?
                       DR. HI LDEBRANDT:
                                            Correct.
                                      And the same thing with Coral?
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                       MR. DRIVON:
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                       DR. HI LDEBRANDT:
                                           Even a marketer can create
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schedules. It's not necessarily -- you know, they can do NRFC
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 26
      trades, imports and exports.
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                         MR. DRIVON: And some of the schedules might even
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      be real.
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                         DR. HILDEBRANDT: Correct.
                                                            0h, yeah, you know,
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      many -- many of their transactions --
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                         MR. DRIVON: For instance, in Get Shorty, that's
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      where they were shorting, at least supposedly, shorting
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      ancillary services, various market participants doing that;
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      right?
                         DR. HILDEBRANDT: I believe they show up in the
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      results \ for \ sell \ back \ of \ ancillary \ services.
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 09
                         MR. DRIVON:
                                        And Enron was concerned with respect
      to their activities in Get Shorty, in that they were actually
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      promising to provide ancillary services that they didn't have.
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                         DR. HILDEBRANDT: That is one aspect of Get
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      Shorty, yes.
      MR. DRIVON: So, that's promising to provide something that they don't really ever intend to provide.
DR. HILDEBRANDT: Correct.
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                         MR. DRIVON:
                                         Have you looked into whether or not
      that's a violation of the California Penal Code?
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      DR. HILDEBRANDT: No, I haven't looked into that. You know, I'm not a lawyer, so I guess I wouldn't trust my own conclusions as to whether it's a violation of California
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 22
      Penal Code.
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                         MR. DRIVON: You might have to ask a lawyer about
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      it.
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                         DR. HILDEBRANDT: I'm interested, yeah. I've
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      listened to discussions of it.
                         MR. ROBINSON: We've referred the matter on to
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 28
      the California Attorney General.
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      DR. HILDEBRANDT: If I've provided -- yeah, to the extent -- I provided as much information I can. You know, I
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      have asked questions in the context of that, you know, to the
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      extent that it requires economic input and knowledge of our
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 05
      markets.
                         CHAIRMAN DUNN: Senator Sher, did you have a
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 07
      questi on?
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                         SENATOR SHER:
                                           Well, I was trying to follow your
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      skillful line of questioning.
                         I'm still not clear whether you're saying that
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 11
      you have an opinion, or that you're reluctant to express an
      opinion in response to the Chairman's questions.
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      DR. HILDEBRANDT: Um, I guess my preference, not to compromise the various investigations that are going on, is
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      to wait, not to comment on that at this point.
                         I guess I could just see that creating more --
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      one, in addition to compromising the other investigations, I could see that creating an awful lot more work for me that would directly detract from actual work I could do.

SENATOR SHER: So, you're reluctant to express an opinion. It's not that you don't have an opinion. You're reluctant to express it for the reasons you just gave.
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                         DR. HILDEBRANDT: Correct.
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                         CHAIRMAN DUNN:
                                            Mr. Schreiber.
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                         MR. SCHREIBER: I'm Chris Schreiber.
      investigator with the Committee.
                                               Were the witnesses table
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      larger, I would be beside you.
                         I just wanted to give staff perspective, for what
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     it's worth.
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                         We -- Dr. Hildebrandt explained earlier that the
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01-21-03. TXT ISO is limited by a couple of different factors. 03 One is, they don't have data necessarily from other control areas. And two, they don't have all the necessary data from market participants.

And just to explain something that we've been doing for the last couple of weeks prior to this hearing, the 04 05 06 07 08 Committee does have access to data from the LADWP control area. And our consultants undertook an independent analysis of that data, combined with ISO data produced or provided with this report, and identified a number of additional transactions, Death Stars in particular, involving several companies. 09 10 11 12 The one company that had been identified was 13 14 And we had a conversation between the Committee, its 15 consultant, and the traders at Powerex and explained a lot of 16 the questions that arose from what appeared to be Death Star 17 transactions. 18 We had a very helpful conversation with Dr. 19 Hildebrandt again last week, further clarifying some of the 20 questions involved here. 21 From a staff perspective, though, I guess I would only point out that because the information is public and we can 22 23 discuss this a little bit more openly, we've come to these 24 clarifications a lot more easily than if the data had remained 25 confidential. 26 Just as an example, once the data was -- once the confidentiality was waived, we received commentary from Anaheim, the Anaheim Municipal Utility, and an explanation was undertaken 27 28 0040 01 by Anaheim, and then Dr. Hildebrandt actually furnished an addendum to his report explaining a particular citation of 02 Anaheim in the report. And this is all in the Members' binders. 03 But from a staff perspective, it's been useful and helpful to have Dr. Hildebrandt's input and have the report 04 05 06 out there for public consumption, because it's been our 07 experience that the people that he is relying upon to provide 08 the data will never provide it. I mean, in the absence of a subpoena, the data that he awaits won't come.

CHAIRMAN DUNN: Other questions from Members? 09 10 Senator Karnette. 11 SENATOR KARNETTE: I don't know who I'm asking 12 13 this of. But if you're not going to get the data, what's the Why can't you just make your comment?

DR. HILDEBRANDT: I think we have offered to make 14 problem? 15 Wait, we've offered to make all our data 16 all the data. available. 17 18 I think the data can be obtained, well, through 19 subpoenas and the various discovery that's occurred. SENATOR KARNETTE: Subpoenas, why do we have to go through that? If we're going to get it, we'll get it. But why can't we just get it?

CHAIRMAN DUNN: Market participants have it, 20 21 22 23 24 Senator Karnette. SENATOR KARNETTE: I understand that. CHAIRMAN DUNN: We have found a number don't 25 26 really want to cooperate very voluntarily. 27 28 Other questions? 0041 Eri c, anything else you wish to add? DR. $\tt HILDEBRANDT: I don't think so, no, just that$ 01 02 03 04

DR. HILDEBRANDT: I don't think so, no, just that I appreciate the opportunity to go in a little more detail in the report. I think this does illustrate -- just to be on the record, I did -- you know, Charlie mentioned the reasons why this was kept confidential.

As an investigator, I did make a pitch for

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07 08 09 As an investigator, I did make a pitch for submitting this, keeping this confidential in October because I knew the results are -- you know, we were casting a broad net.

10 They may change somewhat. I think the basic findings were 11 there. You know, I wanted to get them to regulators. You know, 12 there were proceedings, you know, starting.

there were proceedings, you know, starting.

We had discussed work that we had done with various legal entities, and they were anxiously awaiting, you know, results that we could provide them

So, I did make a pitch for that, just as an investigator. From that perspective, it allows you to focus on continuing the investigation.

So again, I just appreciate the opportunity, given that this is public, to, I guess, have the opportunity to explain in more detail the context of the analysis, which are, you know, difficult to portray in a written report, et cetera.

you know, difficult to portray in a written report, et cetera.

CHAIRMAN DUNN: My only response, Eric, to your comments, obviously, and this is just me personally speaking here, as we discussed early, which we all agree on, more transparency in the market at virtually every turn is very necessary. I don't think anybody here or the two of you disagree with that at all.

I view the transparency side of it to also applying to much of the investigative work that's done within the ISO. ISO is there -- I know I'm preaching to the choir -- to manage the grid for the sake of all Californians. And because these issues touch upon conduct that occurred in the past, and there seems to be little ability to cover one's tracks if a market participant was so inclined, putting the issue out there for all Californians to be aware of, even if preliminary, I think is only healthful, healthy, for the entire environment that we found ourselves operating.

But we appreciate your comments as well today.

Charlie, anything you want to add?
DR. HILDEBRANDT: Sir, and on that, you know, I'm

particularly encouraged by the hundred day discovery in the FERC proceedings. It's clearly given access to the widest range of -- California participants have access to all this data and the power to conduct discovery.

You know, previous to that, it's been -- it has been limited to legal regulatory entities. But in that case, you know, other entities with resources to bear, you know, consumers in the market, have full access to this information through those hearings. Full access to, you know, investigations the ISO has done, DMA has done, as well as all the market information.

So, I think in that respect, they are getting their day in court, albeit on a very short time-frame, but that's encouraging.

CHAIRMAN DUNN: Charlie.

MR. ROBINSON: The only thing that I would add is that we do have a program going before our Board this Thursday, a proposal going before our Board. It's our investigation and oversight program, two of the elements of which really go to what you're concerned about; that is, pushing more information out to investigators and regulatory and oversight authorities at the state and federal level, and also making more information

available to the public, publishing some more information.

CHAIRMAN DUNN: Any last questions on this issue

10 from the dais?

 Seeing none, why don't we take five minutes to give Evelyn a break, and then we'll roll into the C66 issue.

[Thereupon a brief recess

was taken.]

CHAIRMAN DUNN: John, come up here, get settled in. You're going to be first to bat.

Again, I know that everybody has the agenda, or should have the agenda out there. I'm just going to do a little tinkering with it. John Powers is about to be sworn in, as are most of our witnesses.

John, correct me if I'm wrong, but it's my understanding that you're actually going to first touch upon kind of a wrap-up issue from Eric Hildebrandt's testimony regarding Death Star; correct?

MR. POWERS: That's right, yes.

MR. POWERS: That's right, yes.
CHAIRMAN DUNN: Once you finish that, which I
believe is just a few minutes, I'm going to ask Chris Schreiber to give a little of the background relating to the C66 issue,

not the actual merits of it, but rather the procedural aspects that we've been through over the past few weeks and months relating to getting to the bottom of the C66 issue.

But first, Bob, if we can have you do your

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[Thereupon the witness, JOHN POWERS, swore to tell the truth, the whole truth,

and nothing but the truth.]

CHAIRMAN DUNN: If you could identify yourself.

MR. POWERS: My name is John Powers. And I wor as a principal consultant with McCullough Research. And I work

I want to thank the Committee for having me here today, as my colleague, Robert McCullough, has appeared here before. And we just wanted to give you a little bit of an update on some of the things we've been up to, both on Death Stars and on C66.

CHAIRMAN DUNN: John, let's start then and roll right into the update on Death Star, which will dovetail nicely to Eric's comments.

For those on the dais, unfortunately we've got a short cord problem, so we can't really turn the television screen so that both the audience and the folks on the dais can see it. So, if those on the dais would like to see the presentation, we do have copies of it coming around. But on the dais, if you'd like to see it, you have to move down there. We're going to let the audience see it live. John.

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MR. POWERS: Okay, thanks.

Just to dive right into Death Stars, these are one -- Death Stars are one of the Enron schemes that $\operatorname{Eric'} s$ report did a fine job of rooting out from the data that the ISO has available.

We actually, through the efforts of this Committee -- and I again want to thank Christian and Scott Chavez for helping to root out a lot of the data -- we have some data from L.A. specifically that we've been using to identify specific transactions that looked to us like Death Stars. Everybody's got a slightly different definition, so I'll just very quickly say what I think a Death Star is.

A scheduling coordinator will file a schedule for a given date and hour such that that scheduling coordinator imports an amount at one tie point on the ISO system, exports a like amount at that same tie point on the L.A. system, and at the same time is exporting at a different tie point on the ISO system, importing at that same second tie point on the L.A. system.

So, at the end of the day, although a lot of schedules are being filed, the scheduling coordinator has achieved everyone's dream of being paid to do nothing. So, no power need flow. It's exactly offsetting at two different points, so it's what the ISO has been calling in Eric's report a circular schedule." And that's an apt name, although not as colorful as Death Star, so we've stuck with Death Star because that's more common these days.

If the intertie is congested in the import

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direction, the ISO will make a congestion payment to any party

filing a counterschedule for relieving that congestion.

Now, is congestion really relieved? Well, yes, you've opened up a portion of the existing transmission contract that's being used, but really, since no power is flowing, it's hard to say in any real engineering congestion has been relieved. But given that you've hidden the import inside of the existing transmission contract, and you're showing the export to the ISO, you will get paid. So, you'd better do that again and again, which they did.

So, I've put a map in here just to show some of the things --

CHAIRMAN DUNN: John, dais, you're on the full Death Star? John, for those of us on the

 $M\!R.$ POWERS: I'm on the full Death Star map.

It's about Page Four, including my coverpage.

So, the interties used are immaterial. You could do this at any of the interties in California. But what was often done, because the capacities are quite large and it was convenient, there are interconnections between Oregon and California, and interconnections between Nevada and California, which were used quite frequently in the Enron Death Stars.

Now, there's no reason that you actually have to do both halves of this transaction. You can file a counterschedule, one intertie at a time. And I've sort of unfortunately introduced the term "half Death Star" to describe the practice of doing this only once instead of twice. It's not a complete circular schedule, but it's a perfectly offsetting

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counterschedule that, again, no power needs to flow to fulfill this schedule. So, any promise of relieving congestion is not backed by any actual engineering fact. There's nothing really going on to relieve any real congestion.

You can do that in the Northwest or you can do that in the Southwest. I have maps for both that give the idea.

Based on the data available from the ISO and from
L.A., thanks to the work of this Committee, we actually have

80 gone about building a Death Star detection machine, which sounds 10 a bit similar to what Eric's group has been doing.

We were unaware of Eric's efforts until quite recently, but we have reviewed the report that he's disseminated. And the methods are a little bit different because we were looking directly at the L.A. system data and were able to do matches directly without having to do some of the additional work he's done in sort of untangling some of the records at the ISO. So, we can compare directly between one of the off-system systems used to file counterschedules and the

ISO's scheduling information.

We can match by date, and time, and tie point, and energy type, and megawatt amount, anything we want. And we definitely have found some of the full Death Stars that Eric has pointed out. We've also the found a great volume of these half Death Stars, and we're in the process of figuring out what legitimate business purpose these might have.

I do want to say in passing that while I understand the reasoning for making matches the way Eric has done in his report, I would not characterize as an upper bound,

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at least for the Death Star portion, anything that matches

exclusively by megawatt amounts, because there's nothing to prevent a scheduling coordinator from breaking a transaction into two pieces

CHAIRMAN DUNN: Let me interrupt, John, if I can. What you just identified, can you try that in

some lay terms.

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07 08 MR. POWERS: Sure, yes.

Let me back up two pages here, or one page even, to the Southwest half Death Star. If instead of filing a schedule that says, 50 megawatts to Nevada and 50 megawatts to California, you filed a schedule that says, 50 megawatts to Nevada and two schedules that said 25 megawatts to whatever the other way is, you would miss -- I would miss, with the Death Star detection machine we've been building, we'd miss that transaction altogether.

Now, there's ways to, you know, to capture that. But my understanding from the tables in Dr. Hildebrandt's report is that we were matching on megawatt amounts to be able to determine offsetting schedules. That's a good strategy that will find you some, but it may or may not find you all of them.

CHAIRMAN DUNN: And if I know you're doing it, and I split up my schedules, I'm going to circumvent the

detection machine.

MR. POWERS: Right. Or, if you have a legitimate sale going on, say you have a legitimate export of 100 megawatts, and then you add 50 megawatts to that and 50 megawatts the other way, that doesn't make that second pair of

transactions any more legitimate just because you have one sale that's for a legitimate business purpose. You can bury these other deceptive transactions inside.

So, I want to reiterate something that Dr. Hildebrandt said, this is not a trivial data mining process. There is a very great amount of data available at the ISO and almost as much from L.A. There's a lot of information there.

We have begun to screen that and found many, many matches that look to us similar to the Death Star and half Death Star strategies as articulated in Enron's memos.

CHAIRMAN DUNN: John, listening to you, at least my perception is that any Death Star detection system probably has an infinitesimal number of ways to circumvent it, because it's based simply on preordained numbers, like schedule-toschedule, 50 out-50 in. If it's not that, it's not detected as a Death Star.

MR. POWERS: Ri ght.

CHAIRMAN DUNN: That sort of cat-and-mouse game could continue forever?

MR. POWERS: Yes.

CHAIRMAN DUNN: That was just my perception. MR. POWERS: So, there are things that we can look for in the past that will help us be able to document individual events that could be backed up by interrogatories or anything of the things we talked about earlier.

But as this -- without greater transparency, without access to information about what's going on simultaneously on both systems, you can always devise something

that would hide these kinds of transactions.

But verifiable information about sources and sinks, which is something that Eric hit upon towards the end of his discussion, is very important for these transactions. That's what makes these legitimate transactions. If there is a real source of power backing up a real load to which you're delivering that power, then, you know, that's what a schedule is supposed to be.

CHAIRMAN DUNN: 0kay. 09

MR. POWERS: Similar to Dr. Hildebrandt's

comments, I would say that a match in our system indicates the

beginning of due diligence and not the end.

So, we had a conversation that Chris described a few minutes ago with Powerex because they lit up on several transactions. And they were able to explain what was going on, and some of the problems we were having with our matches, so that the net effect of that conversation was that we were able to improve the matching power of our algorithm.

I would not speak to the universe of all

transactions they undertook, but the ones we looked at looked like they had a legitimate business purpose.

Now, we've also found ones for Enron that, you know, that definitely meet the description of a full Death Star as described in the Yoder-Hall memos. And even in the records that the ISO has provided have such quaint names for half of the transaction as "Death" and "Star." This looks a lot more like it probably was filed under false pretenses; it looks that way. So, others can be the judge of that.

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> We put a few sample transactions from Enron up here just so people can look at them. But you see what they re doing. They're filing schedules in and out of California on two separate systems at the same time. They cancel perfectly, hour by hour, megawatt by megawatt, tie point by tie point. And, you know, that meets the description that was in the memos that have been revealed.

Anything you want to know about that?
CHAIRMAN DUNN: I'm going to pose to you, John, the question that I posed to Eric that he reluctantly declined to get specific about.

As to Death Star, who in your opinion, other than Enron, engaged in Death Star-like activity that was not for

legitimate business purposes?
MR. POWERS: Y MR. POWERS: Yeah, and where we are is, we've found matches that look like they could be Death Star projects for several scheduling coordinators, but we've only had the one conversation that I just cited with Powerex.

Our purpose is to name names, and we'll be happy to after we've had these discussions, because so far, all we've got is matches that looks like, you know, there's some funny

data.

So, when we talk to these, and again, Chris has been great at helping facilitate these conversations with the parties involved, we'll be happy to name names. Can't do it today. We're really very -- you know, as I say, we're very early into this process compared with Eric's report because, you know, we hadn't even seen Eric's report until within the past

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13 15 month.

CHAIRMAN DUNN: Senator Morrow.

SENATOR MORROW: To clarify, is Powerex then

entirely off the suspect list?

MR. POWERS: No. Powerex explained the business purposes of the transactions that we were -- that we were looking at. So, you know, Powerex has indicated a willingness to work with us so they will be off the list, because they think their transactions were all for a legitimate business purpose. But we only discussed a subset of our findings

with them.

CHAIRMAN DUNN: Mr. Drivon.

MR. DRIVON: It seems to me that when you look at these sorts of transactions and try to analyze them, you're kind of faced with a situation kind of like a fellow looking up at a

clear night sky and saying, Which one of those stars am I going to have a look at? Because there's a whole lot of stars that you could have look at; aren't there?
MR. POWERS: Yes, ther

Yes, there are.

And for every one of those that you MR. DRIVON: pick out, there's a whole lot of data that's necessary to be looked at in order to make any kind of conclusion.

MR. POWERS: MR. DRIVON: Ri ght.

MR. DRIVON: So, given the real world of resources, can I conclude that it's highly unlikely that we will ever be able to put our arms around the general ballpark of the effects of these kinds of activities?

MR. POWERS: I would hesitate to say I could ever

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identify everything that might be a Death Star.

I would say that we could get to being able to, you know, approximate an order of magnitude impact.

But I would agree with your statement. be very difficult to say we've captured them all and nothing but.

MR. DRIVON: If I understand it correctly, the general idea of this kind of market behavior was a promise to supply power to mitigate congestion. Was that it?

MR. POWERS: Or maybe just to collect congestion

fees, but a promise is in there, yes.

MR. DRIVON: On the surface, you'd say, well, we're going to supply some power to relieve this congestion over here. That's the surface of it; right?

MR. POWERS: Ri ght.

MR. DRIVON: Then you get to the fact that apparently they never intended to supply any power or mitigate any congestion; right?

MR. POWERS: That's a fair characterization.

MR. DRIVON: They just promised to do both

without ever intending to do either, apparently.

MR. POWERS: Uh-huh.

MR. DRIVON: And then the next thing is, maybe there was never any congestion in the first place, because the congestion that was there was something that was caused by a schedule that never existed, or on a tieline, for instance, that wouldn't accept the kind of schedule that was there, and appeared to be congestion. We call it phantom congestion;

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right?

MR. POWERS: Yeah. The problem of phantom congestion is -- can certainly be related to this.

MR. DRIVON: So now you've got a fellow that's promising to supply power in order to mitigate congestion without ever intending to supply any power or mitigate any congestion, and the appearance of congestion could well be something that that same entity made appear to be when it really wasn't?

MR. POWERS: Yeah. We have not tried to confirm We have not tried to look to see if the volume that last piece. was such that the false -- these schedules actually pushed interties into a state of congestion by the ISO's definitions. But that's possible.

MR. DRIVON: Although we have been able to figure out that there were instances of congestion that was phantom, maybe not connected, or at least you haven't looked at whether they were connected with the Death Star situation.

MR. POWERS: Correct.

MR. DRIVON: And then, of course, if you are going to have a problem with supply, then you move into an area of ancillary services, at least as a possibility.

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                        MR. POWERS:
                                       Or into the real-time market, yeah.
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     MR. DRIVON: So, if you did all of this, then at the end of it, of course, you could Get Shorty, which would be to promise to supply ancillary services that you didn't have and
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      knew for sure would never be needed. And you could get paid for
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      that, too.
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                        MR. POWERS:
                                      Yeah, these different strategies can
 02
      interact with one another.
 03
                        And again, I was really just here to mop up after
      the Death Star issue, because there's a lot of these issues that
 04
      can all be stacked on top of each other. MR. DRIVON: I'm just try
 05
 06
                                       I'm just trying to figure this out,
      because it's kind of complicated for me.

MR. POWERS: Right, yeah.
 07
                                      Right, yeah.
And so, then you say, it's pretty
 08
 09
                        MR. DRIVON:
 10
      easy to evade all of this by just changing the way that you do
      it in little ways that gets around the algorithms that you
 11
     figure out to try to catch them at it?
MR. POWERS: Well, unle
 12
                                        Well, unless there's information
 13
      required about the source and the sink for the schedule.
 14
 15
                        MR. DRIVON:
                                       Transparency.
                        MR. POWERS:
                                       Ri ght.
 16
                                                 We advocate transparency.
 17
      We like transparency
                                       Me, too.
N: I'm detecting a theme here today.
                        MR. ĎRIVON:
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 19
                        CHAIRMAN DUNN:
                        MR. DRIVON: Now, the other thing is, given the
 20
 21
      ease, given the obscurity that we have now as opposed to the
 22
      transparency we would like to see, and given the resultant ease
 23
      of evasion with respect to detection and analysis of this
 24
      situation, what do you think the probability is that that
 25
      activity has stopped?
                        MR. POWERS: Um, there's no mechanism that I'm
 27
      aware of that would reliably and fully stop that sort of
 28
      activity today.
0056
      $\operatorname{MR}.$ DRIVON: So if we're to believe that it stopped, we have to make that belief based upon our ability to
 01
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 03
      accept the good will and general law abiding nature of the folks
      who have been involved in this in the past?
 04
                        MR. POWERS:
 05
                                       What stops this kind of activity is
     more transparency and more information being disclosed about what the activities of every participant really are.

MR. DRIVON: And those two criteria that you have
 06
 07
 08
 09
     just outlined for us, on that we're 0 for 2.
 10
                        MR. POWERS:
                                       Yeah, we need -- needs work.
                                          0kay.
 11
                        CHAIRMAN DUNN:
                        John, any other comments on the Death Star side?
 12
 13
                        MR. POWERS: Just that we would be happy to come
 14
      back and share our findings as we go along.
 15
                        And we appreciate the help we've gotten from
      Christian in pushing this research.
CHAIRMAN DUNN: You
 16
 17
                                           You can safely assume that the
     invitation to return and share those findings will be made.

Before we roll into the C66, I want to take a
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 19
 20
      personal note here.
      After sitting and listening to Larry question John on few issues, something that I want to make everybody
 21
 22
 23
      aware of, although he tries to downplay it.
 24
                        Two years ago when we started this investigation,
      Larry Drivon had, like the rest of us, limited exposure to the
 25
 26
      issues of energy. I think many of you who have dealt with him
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Page 25

over the past two years have come to find that he is quick student and truly a master many of the issues, very complex

27 28 0057 01 issues relating to energy.

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06 07 In recognition of his work, for those lawyers in the room, you'll understand this, the National Law Journal just recently named him as the Pro Bono Lawyer of the Year for entire nati on.

So, congratulations, Larry, for that wonderful, wonderfully well-deserved recognition for your work on behalf of the Committee, Larry. I just wanted to make sure the public was aware of that.

I won't open it up for questions or comments on your award, Larry. We'll have to put you under oath at that point in time.

What we want to do now is to roll into the C66 issue as identified. Before John starts talking about the substance relating to C66, I've asked Chris to share with the Committee the procedural struggle we've had with respect to the C66 issue.

Chris, if you would, please.
MR. SCHREIBER: Thank you.
I'll try to make this as brief as possible,

because I know we are operating on a short timeframe here.

The Committee undertook to get information, certain data, from the ISO in about May or June. Actually, I believe it was June was our first official request to obtain the

schedules, flows, and payment information from the ISO for the winter of 2000-2001. The reason for this was because the ISO had

claimed in a series of reports during that time period that its

transmission lines were 100 percent congested, 100 percent of the time on several days.

That data did not reconcile with publicly available data from the Bonneville Power Administration. this discrepancy between the two was critical to answering several questions about the effect of the Enron strategies on the reliability of the grid, as well as on the management and policies and practice of the ISO.

The ISO, upon our initial request and several subsequent requests, to make a long story short, was extraordinarily reluctant to produce this data to us. would be my opinion -- and I made this clear, and we've since reconciled it, several several months later -- was reluctant to provide this information to us. In fact, I would characterize it as, they had a distinct desire to make sure that we didn't get it.

CHAIRMAN DUNN: Did not get it.

MR. SCHREIBER: Did not get it.
Several letters, probability four to six letters
later, several conference calls later in which the Committee and its consultants expressed, you know, I would say humble ignorance about the subject, and about wanting the ISO to take

us through this data, we finally got it at the end of October.

What we discovered at that point was that the data that we had long been requesting uncovered this C66 issue. And just to characterize a particular conference call that we had, we'd been unable to, as I mentioned, to reconcile publicly available data with the ISO data.

Was the transmission line At issue here was: between California and Oregon available and open during key moments, including blackout days, during the energy crisis? ISO has claimed that it was completely congested, and we believe that that was not the case.

When we finally opened up the data, what we discovered was that the ISO had -- and I believe the word is

01-21-03. TXT 08 appropriate -- secretly introduced a protocol which they'll 09 explain later today in which they limited the transmission capacity on these lines. And there was particular data set within all the data that we had requested which has now -- going to colloquially refer to it as the C66 protocol. 10 11 12 13 It was, from a staff perspective, a struggle to And as I commented then and have commented since, 14 get the data. 15 it appeared that the ISO had something to hide on this issue. CHAIRMAN DUNN: I know the ISO will resist that characterization, Chris, but let me just ask you your own 16 17 personal opinion as to why the ISO may have had motivation not 18 to fully disclose that data, if you know?

MR. SCHREIBER: Well, my personal opinion about their refusal to discuss close the data is -- I guess I would characterize it by saying that what we found is of questionable policy and -- well, I guess I would say that. It's a 19 20 21 22 23 questionable policy that the ISO undertook, and they undertook it in secret, and I think its disclosure today -- I know it's been mentioned previously -- but its more full disclosure today is not -- was not an attractive possibility to the ISO.

CHAIRMAN DUNN: And fair to say that we've been 24 25 27 28 0060 01 in a debate with them as to the legality of the C66 issue. 02 MR. SCHREIBER: Correct. CHAIRMAN DUNN: And the practical import of reducing that capacity during times of blackout is that, at 03 04 least theorhetically, such blackouts could have been avoided if 05 the full capacity had been made available; is that correct? 06 07 MR. SCHREIBER: I would defer to an expert, but that's my understanding. CHAIRMAN DUNN: 08 09 Anything further, Chris? 10 MR. SCHREIBER: Not right now. 11 CHAIRMAN DUNN: John? $$\operatorname{MR}.$$ POWERS: Let me just make a couple of comments to echo some things that Chris said. 12 13 That C66 is one instance of what's known as a capacity benefit margin, or CBM. This is something that 14 15 undoubtedly transmission operators --16 CHAIRMAN DUNN: I'm going to interrupt you and 17 18 19 20 21

remind you, you know that you're speaking to lay people. And I know when we're dealing with things like CBMs, and so forth, try to keep us at a first grade level.

MR. POWERS: Sure. Sure.

CHAIRMAN DUNN: It will be greatly appreciated. MR. POWERS: It is definitely a tool that transmission operators may use to protect the reliability and security of their system. That's something that is in as the security of their system. That's something that is in, as the ISO has pointed out, the ISO tariff and in the North American Electricity Reliability Council rules and guidelines, that it's a recognized tool in the industry for maintaining system

reliability.

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The way that -- my review of the way the ISO has used it is that it was an unusual application of an industry standard tool, in particular, the duration and method of determining the amounts of the CBM declared, or the amount put on in terms of reserving capacity.

The ISO put out a fact sheet in which they make it clear that they were not restricting capacity because the energy was allowed to flow over those interties in the real-time market.

In fact, while that may technically be true, that capacity was reserved by the ISO for its own use and taken away from any market participants who wanted to reserve capacity in the hour-ahead or day-ahead markets.

01-21-03. TXT MR. SCHREIBER: 15 Maybe I can give just a quick --16 MR. POWERS: Sure. -- couple sentences from a lay 17 MR. SCHREIBER: person's perspective about what capacity benefit margin is. 18 There's a transmission line, and I'll pick one, 19 although the ISO did the CBM protocol on three separate intertie 20 21 points, is my understanding, for a period varying anywhere from, Í think, 10 to 13 months. 23 CHAIRMAN DUNN: Late 2000 into --24 MR. SCHREIBER: Yeah. Starting on December 30th of 2000, the transmission line between California and Oregon, to use an 27 example, the DC intertie, is about 2150 megawatts. There are 28 existing transmission contract holders that use the transmission 0062 01 and have a contract to do so on this line. And the sum total of 02 those contract holders' megawatts reserved on the line approximates about, let's say, on any given day 1400 megawatts of the 2150. That leaves an available transmission capacity, 03 of the 2150. That leaves an ATC, of about 750 megawatts. 04 05 06 Each day, the ISO would put that 750 megawatts up 07 for auction for other market participants to bid on who wanted 80 to use the transmission line. What the ISO did when they invoked this protocol is, they simply swept away that 750 available megawatts. 09 10 And they have argued that they did so for 11 reliability reasons, as I think, John, you're probably going to 12 13 get into. 14 But I guess the point I want to make here is that there is a rated capacity of the line. There are existing transmission contracts on the line that, you know, eat up a substantial portion of the transmission. 15 16 17 And then there's this remaining bit. And that 18 remaining bit is what CBM eliminates, or in this case, all of which. I mean, you technically could, you know, reserve under 19 20 CBM 100 megawatts or 50 megawatts.

They took all of it. 21 22 23 MR. POWERS: Ri ght. So, any kind of restriction on intertie capacity with other regions has pluses and minuses for California. But 24 25 certainly, it can have unanticipated effects. It can separate markets at the time when more flexibility is needed. It can drive participants away from the market. Participants who don't 27 28 0063 01 understand where the capacity which used to be available has 02 gone may decline to bid into the California market at key times. In the Northwest, we really -- we, colleague, Robert McCullough and I, have spent a good deal of effort trying 03 04 to find anyone who understood what was going on, who knew about a specific reservation of capacity in the day-ahead and 05 06 07 hour-ahead markets, and on an intertie which many in the 08 Northwest view as important, since they did spend a lot of money 09 to build it. 10 And we have been unable to find anyone who understood what the ISO was doing and who knew that there was a 11 12 CBM placed on the intertie over this period. Now, that's, you know, we can get into what was and what wasn't on the ISO website on what day, okay. But the practice in the industry was -- or the knowledge in the industry was not common. It was not commonly known that this was going 13 15

So, that did discourage market participants from the kinds of transactions that they had been doing up to that point, which included scheduling power into California for re-export into the Northwest, for re-import back into

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01-21-03. TXT
                     This is something that's been going on between the
     Cal i forni a.
 23
      two regions for as long as there have been interties.
     Northwest is a great place to store power because of the Columbia River. You can actually store energy behind the dams in the form of water for times when it's needed here in
 24
 26
 27
      Cal i forni a.
 28
                         The ISO -- it used that strategy extensively
0064
 01
      during the crisis.
                               They did store energy in California and
 02
      re-import it. But there may have been opportunities to do more
      of it that were restricted by the imposition of this CBM
 03
 04
                         Yes, the real-time market was still in place, but
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      the ability to schedule a plant -- most power plant operations
      are scheduled ahead of time. Most are not scheduled in real time. So, power plant operations in both the Southwest and the
 06
 07
      Northwest could have been affected to the point where a certain
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 09
      amount of power was not scheduled for export and re-import
      because participants didn't know they could.
 10
     MR. SCHREIBER: I would point out, just to interject real quick, John's point about the lack of understanding is underscored here. We have a letter from the
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      Power Manager at Tacoma Power, George Whitener, to you.
     faxed that over this morning. And it explains Tacoma's ignorance about the protocol at the time.

And as John said, we really have not found
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      anybody yet that knew this was taking place.
                         CHAIRMAN DUNN: Let me stop on that point.
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 20
      know we do have ISO representatives here, and I will invite them
 21
      up in a few minutes to comment.
                         But they have been telling the Committee, the
      Committee staff in particular, "We did put it on the website."

Now, has your research, John, I want to make sure
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24
 25
      I understand, you've contacted a number of affected interests,
 26
      market participants and otherwise.
                         MR. POWERS: Yep, Yep.
CHAIRMAN DUNN: Many of whom are pretty
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0065
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      sophisticated folks on how the market operates.
                         MR. POWERS: Yes.
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 03
                         CHAIRMAN DUNN: Including would probably monitor
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      any sort of subtle announcement of something as significant as
 05
      this.
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                         MR. POWERS:
                                         Yeah.
 07
                         CHAIRMAN DUNN:
                                            And as of yet?
                         MR. POWERS: We have found no one. And, you
 08
 09
      know, this is inclusive of presentations at power conferences in
     the Northwest with power managers from all the utilities in the Northwest where, you know, my colleague would give a presentation and ask, "Now, who knew?" And, you know, would get a storm of people up afterwards saying, "Thank you for
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 11
 12
 13
 14
      explaining this. We finally understand what happened all this
 15
      time ago.
 16
                         And certainly it was known that the capacities
 17
                            Certainly it was known that power was not
      had been reduced.
 18
      getting north when entities were trying to schedule power for
 19
      export and they couldn't do so.
      But as to why and what the mechanism was, this was -- this was not well known.
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 21
 22
                         MR. DRIVON:
                                        Could I ask just a question for
 23
      information.
 24
                         When this capacity is apparently removed, does
 25
      that then look like congestion in that line?
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                         MR. POWERS:
                                         Uh, my understanding of all of the
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ISO congestion rules is imperfect.

MR. DRIVON: No, no. I mean from the standpoint

01-21-03. TXT 0066 of a market participant who $\mbox{\it mi}\,\mbox{\it ght}$ be out there looking for evidence of congestion. 01 02 MR. POWERS: I'm not sure. I don't know the 03 I can find out. 04 answer to that. 05 MR. DRIVON: Because I was just thinking about, 06 if some of them were trying to Death Star and Get Shorty, and 07 all of that kind of stuff, maybe there would be the appearance of congestion that was caused by this kind of activity.

MR. POWERS: My understanding is that by setting, 08 09 you know, I apologize for not having the picture in the handout, 10 but the picture just follows my table on Page Six here. 11 My understanding was that all available capacity, 12 or essentially all available capacity for new firm use, which is the day-ahead or the hour-ahead market, was absorbed effectively 13 14 by the imposition of -- the picture I have here is of C66 on the 15 16 California-Oregon intertie. So that until after the hour-ahead market closed, the line would appear congested. 17 That's my understanding of what the effect would be. It would be a good question for the ISO. 18 19 20 MR. DRIVON: In other words, it looked like the 21 pipe was full? 22 MR. POWERS: Uh- huh. And some of the ISO market reports at the time reported really what -- Chris said this well 23 before. This is what set us into exploring this. We were getting reports that said California-Oregon intertie is 100 24 25 26 percent congested 100 percent of the time on several days. 27 When we were able to go look at the data from 28 Bonneville, which meters flow in real-time on the line, which 0067 01 showed that the line was half -- half empty or three-quarters 02 empty at different hours of the day. So, we were trying just to answer the question: What is causing the congestion to be reported? And this was, I 03 04 think, one of the root causes that was identified.

MR. SCHREIBER: If I may, I'm going to lay on another layer of a little bit more technical information, and 05 06 07 John, you can correct me if I'm wrong 08 If you can imagine PG&E in the north. Let's say they have a -- I'll make up numbers -- they have a load they 09 10 need to meet of 5,000 megawatts to their customers.

You can imagine that as a control operator, they 11 12 may need -- you know, they could experience an unexpected bump 13 14 in their demand of their customers. So, they would request of the ISO, or the ISO would make the determination that there 15 16 would be additional transmission capacity possibly necessary. That would be an example of where a CBM would be more traditionally used. 17 18 19 The operator would say, "We're going to reserve 20 an extra 500 megawatts just in case there's a bump so that we 21 can bring power in on the transmission line, " so that you, PG&E, can then deliver that to your customers. That would be an 23 example of an import situation in which transmission capacity 24 would be used, and the capacity benefit margin would be 25 appropri ate. 26 This, we should add, is an export situation, where they are invoking what was traditionally an import use on the power lines leaving the state. 27 28 0068

And the ISO has explained to me in our conversations about this, that this was a tactic that they undertook to combat megawatt laundering, because they were seeing a lot of megawatts leave the state, go to Oregon, come back, either A, circumventing the price caps, or B, simply not coming back.

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01-21-03. TXT John, if you can make the point about the pay I think it's relevant. 07 08 back of power. MR. POWERS: I mean, the issue of megawatt laundering was real over this period. It was one of the schemes that was identified as a problem in the -- in the memos we were 09 10 11 12 talking about this morning. The reason the California-Oregon intertie and the 13 14 DC intertie were built was that the two regions operate very 15 differently. It has been routine for decades for Northwestern utilities to factor, or to store and return, power that 16 17 California sends north. So, this is a transaction that is done very routinely by power managers in the Northwest on behalf of requests from the Southwest, especially California.

Now, you know, I can't say how effective a CBM would be at preventing megawatt laundering, but it was -- it appears to have been effective in preventing legitimate deals 18 19 20 21 22 23 from going on in this way that has been done for many years, 24 sending power north for storage, and return when needed. 25 MR. SCHREIBER: And I would just make that even 26 more lay. 27 That means power from California sent up to 28 Oregon on a Monday would be returned back to California via 0069 01 hydro release or through some hydro-electric generation on a 02 Wednesday. 03 Meaning on the 17th, when California was blacked out of January of 2001, presumably or, I guess, it's possible 04 05 that had we sent power up to Oregon two days prior, that might have been repaid enough so to have prevented the blackout.

CHAIRMAN DUNN: But because of the reduction in capacity, we couldn't get it back, from a lay perspective.

MR. SCHREIBER: We never sent it up. 06 07 **08** 09 10 MR. POWERS: Never sent it up. And again, there was no such restriction in the 11 real-time market, and the ISO did use this strategy in real-time themselves. Not all plants that would bid into the day-ahead and hour-ahead market would be available in the real-time 12 13 14 So, it is possible that the ISO caused some plants to 15 market. 16 forego the opportunity to export power to the Northwest for 17 later re-import 18 The ISO definitely understood the strategy of sending power north and getting it back the same day, next day, next week, or whatever. The effect wasn't to prevent that from 19 20 happening. The effect may have been to reduce the volume based on restricting that activity in the day-ahead and hour-ahead 21 22 23 markets specifically. CHAIRMAN DUNN: Okay, John.
MR. SCHREIBER: I would say, just to add another element here, John has mentioned that utility executives in the 24 25 26 Pacific Northwest were unaware of the protocol. 27 28 The ISO has claimed that it was listed on its 0070 website, meaning the utility executives saw that 750 megawatts I 02

talked about earlier, they saw that it was at zero.

I think the ISO, if I understand their fact

sheet, considered that adequate notice that they were doing this.

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The truth is, though, that the ISO did actually brief one market participant, and that was Enron. When we discovered this, we simultaneously did a search of Tim Belden's e-mails to find out whether or not he knew about this protocol. And you'll see in the press packets and in the Members' binders as well that, in fact, he did know that there was a dialogue between several members of his trading operation in Portland that were briefed by the ISO.

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CHAIRMAN DUNN:
                                                  But that briefing was at Enron's
 14
      request when they discovered it; is that correct?

MR. SCHREIBER: We presume. It's not been clear.

The ISO has not made clear to us how or why Enron was briefed.

We don't know who -- my presumption is that Enron made the call,
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       noticing the ATC dropping from 750 in this example to zero and
 20
       asked.
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                            CHAIRMAN DUNN: Mr. Drivon.
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      MR. DRIVON: This Enron briefing, as I understand it, or at least the e-mails are in April of 2001?
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                            MR. SCHREIBER: Correct, April 3rd, I think,
 25
       2001, yeah.
                                             Wasn't Enron still playing some
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                            MR. DRIVON:
 27
       congestion games after April of 2001?
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                            MR. POWERS: I don't know. I don't have all the
0071
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       dates.
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                            MR. DRIVON: I believe I remember they were.
 03
                            CHAIRMAN DUNN: John, more on C66.
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                            MR. POWERS: Yeah, the other things, Chris brings
       up the fact sheet, and we looked at that for a couple of things.
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       The fact sheet cites problems on what's called Path 15, from
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       Southern California to Northern California, as one of the
 08
       reasons that this CBM was imposed at the -- on the
      California-Oregon intertie.

While it's possible that a restriction at the
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 10
       California-Oregon border would somehow improve what's going on
 11
       on Path 15, a far more direct approach would be to just put a
 12
      restriction on Path 15 if that's the real issue.

Further, the DC intertie, which goes from L. A. up to the Nevada-Oregon border, is parallel to Path 15. It does not -- no change on the DC intertie will have any but the most indirect officers on Path 15.
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       indirect effects on Path 15. So, that explanation is, at best,
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 18
       in complete.
      And the effects of something on the market, which I put on the last page here, were to greatly separate the two markets beyond what they had been historically, even during the
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 21
       price spikes of 2000.
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 23
                            This is my last page.
CHAIRMAN DUNN: Entitled, "Wholesale Electricity
                            CHAIRMAN DUNN:
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 25
       Prices: COB and Palo Verde.
 26
                            MR. POWERS: Yeah.
 27
                            I'm a simple country economist, and I look for
       things that, you know, separations in the market.
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0072
      chairman dunn: We have a simple country economist, and we have a simple county lawyer over here.

MR. POWERS: Right.
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                            If the markets are efficient, if there's enough
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       exchange going on between the two markets, the price in Palo
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       Verde and the price at COB should not diverge very much.
      only explanation is a separation between the two markets based on restrictions, real or arbitrary, I don't know, that separated the two markets so that somehow, trading between the two was
 07
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 10
       restricted.
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                            Prior to the imposition of the CBM, the two
      markets, even during times of the chaos, traded at least fairly in sync. After the imposition of the CBM, the two markets
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 13
       diverged quite dramatically and in ways that we have not seen
before or since. The Northwest, given that California was short
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 15
 16
       in supplies -
                            CHAIRMAN DUNN: Let me interrupt you for a
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 18
       second, John.
                            As you look at those two bar graphs there. MR. POWERS: Two lines.
 19
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01-21-03. TXT
                        CHAIRMAN DUNN: Two lines, I'm sorry.
                                                                       When the
 22
      reduction was instituted in very late 2000 --
 23
                        MR. POWERS:
                                       Yes.
 24
                        CHAIRMAN DUNN:
                                              these two lines separated?
                        MR. POWERS: Yes. The price at the
 25
 26
      California-Oregon border and the price at Palo Verde, which
     normally are -- move in sync, and which normally are quite close to one another, representing nothing but the cost of moving
 27
 28
0073
 01
      power from one region to another, the costs in the two regions
 02
      diverged for reasons no one in the Northwest could understand at
 03
      the time.
                  No one quite got why the price in the Northwest
      should suddenly be, you know, very much meaningfully higher than the price at Palo Verde.
 04
 05
 06
                        One possibility is that the two markets
                    The only possibility that I can think of is that the
 07
      separated.
 80
      markets were separated.
 09
                        CHAIRMAN DUNN: Anything further in your
 10
     presentation?
 11
                        MR. POWERS: No, I have no more, but I can answer
 12
      questi ons.
                                          Let me pose one. I'll certainly
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                        CHAIRMAN DUNN:
      ask it if the ISO representatives wants to comment as well.

Why late December? Or why late 2000? Why eleven
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 16
      months or so that this was in operation from your perspective,
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      John?
                        MR. POWERS: Why did it start? CHAIRMAN DUNN: Yes, why did it start in late
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 19
     2000? Why did it end approximately, I think, Chris, you mentioned this, eleven months later?
 20
 21
      $\operatorname{MR}.$ SCHREIBER: Yeah, and it depended on -- they did it on three different tie points. They did it at the
 22
 23
 24
      Nevada-Oregon border, Path 15, and at the California-Oregon
 25
      intertie.
 26
                        So, between those three, it stopped in October,
 27
      December and January of '02, for January '02, December and
      October of '01.
 28
0074
 01
                        CHAIRMAN DUNN:
                                           Understood.
 02
                        John, from your perspective, why those particular
 03
      dates?
     MR. POWERS: Why it started is, you know -- why it ended I don't know, because there's nothing special going on
 04
 05
     in late 2001. The supply -- well, the energy crisis as tracked by pricing and headlines had mitigated by the summer. So, there
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 07
 08
      was no reason I can think of to have anything in place for many
 09
      months after that.
                             I don't know.
                        Why it began when it did, I can only speculate.
 10
 11
      My speculation would be that somehow letting power out of state
      was viewed as bad. And, you know, if they were seeing power go
 12
 13
      out of state and not returning, one reaction might be to try and
 14
      keep it all in state.
                        Now, that's a trade-off that I can't say, for
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      policy purposes, whether it's good or bad, but certainly it did
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      have the unintended consequence of the potential for missing
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      opportunities to integrate the two regions.
     But, you know, the exact date, I have no idea why it would start on December 30th.

MR. SCHREIBER: I need to actually correct
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      something.
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                        We know it started on December 30th of 2000, and
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      I apologize, it stopped in the one case in October of 2001, in
     another case at a different tie point in December of 2001, and on Path 15 on January 31st of 2001.

CHAIRMAN DUNN: 2001 or 2002?
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MR. SCHREIBER:
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                                            2001. So in that case, it lasted
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     just one month.
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     So the greatest time was about eleven months, a little bit more than eleven months, and the shortest was one
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      month.
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                        CHAIRMAN DUNN: Did the start date for each of
      those three, the Nevada-California, Oregon-California, and Path 15, all start in approximately late December, to our knowledge?

MR. SCHREIBER: Yes, to our knowledge.
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                        CHAIRMAN DUNN: At that specific time, we had an
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      ISO Board that I'll just label, it was lame duck. The
      Legislature shortly thereafter changed how that Board was
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      constituted.
                        In your discussions, your investigation, Chris,
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      was either the lame duck board or the new board advised of the
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      C66 issue?
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                        MR. SCHREIBER: No. In fact, it is my
      understanding that there is a forthcoming briefing on Thursday
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      for the first time on this issue.
                        CHAIRMAN DUNN:
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                                           John, anything additional to add?
                                       No, that's it.
N: Questions, Senator Morrow?
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                        MR. POWERS:
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                        CHAIRMAN DUNN:
                        SENATOR MORROW: Mr. Powers, you may not be able his. I'm trying my best to ask the question. With the implementation of the CBM, and obviously
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      to comment on this.
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      you've indicated, whether intended or not, the adverse
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      consequences of that.
                                 I take that for granted, that's what
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      happened.
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                        On the other hand, I'm hearing that it was
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      implemented for the purpose of dealing with the megawatt
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      laundering issue.
                        I guess my question is, if you feel competent to
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      venture an opinion on this, but given that, the CBM, the
      implementation of this, I mean, and its adverse consequences, how foreseeable in your view would those adverse consequences
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                        I guess what I'm getting to is, okay, the
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      strategy didn't work, but I want to go take it one step
      further. A lot of times as lawyers, you've got two different strategies. Either one of them could be reasonable under the
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      circumstances and backfire.
                        In view of common industry standards prevailing
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 14
      at the time.
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                        MR. POWER: I'll take -- I'll answer both sides
 16
      of that.
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                        I think that someone, you know, with a legal and
      transmission background might want to look at whether a CBM is
 18
      the right way to deal with megawatt laundering. Megawatt
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     laundering is a purely economic issue. It's not a system reliability issue. It's not a system security issue.

CBM is authorized for reliability and security,
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      not for arbitrary economic reasons.
                        And could the effects have been foreseen? Yes.
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      If you ask an economist what effect is there in restricting
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      trade between two regions with complementary comparative
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      advantage, both sides suffer.
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                        Now, could it have been foreseen that soon
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      thereafter we would have blackouts? I would not be so bold as
      to ascribe causality. You know, CBM causes blackouts? No.
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      wouldn't say that.
     But could you see that it would restrict the flexibility that the ISO had, and that other market participants
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had, in providing more resources to California? Yes, you can 06 foresee that easily

SENATOR MORROW: Given what you just said, do you have an opinion as to whether or not taking this sort of action with the CBM would have been unreasonable under the ci rcumstances?

MR. POWERS: I think it would be that it was unusual. It was an unusual application of an industry -industry standard tool.

And I have not heard an explanation yet that is reasonable to me. I don't think that the explanation about Path 15 is a reasonable explanation about why you would impose a restriction somewhere else. I don't think an explanation about megawatts laundering is reasonable for, you know, to base the argument on system reliability and security.

There may be a reasonable explanation, but I have

not heard it.

MR. SCHREIBER: Senator Morrow, I would also add that once the protocol was invoked, I think it would have been reasonable to have also notified market participants, both in the Pacific Northwest and in California, on a more blanket basis.

The ISO claimed that they posted an explanation

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> on their website, but they didn't do that until November of 2001, almost a year after the protocol had been started.

From a reasonability perspective, I think there were corollary elements that were not undertaken that would have

gone a long way to make it a more reasonable.

If I can, I fear that, you know, because this is a retrospective look, that there is -- that we're undoing some of the strides that we've made with ISO staff. They've been very helpful since we broke through this wall in helping us get And both Dr. Hildebrandt and Beth Ann Burns through this data. in particular have been extremely helpful since this.

But since we're looking back in a more rancorous time in our relationship, I fear we might return to it, but I hope not.

CHAIRMAN DUNN: Understood.

One observation as a follow-up to Senator

Morrow's questioning.

As far as the posting on the website, I'm assuming, Chris, that the Enron memos are publicly available as well, too.

> MR. SCHREIBER: They are. We've had those

wai ved.

CHAIRMAN DUNN: I don't want to inadvertently violate any of our confidentiality rules.

While this Chair, certainly publicly, everyone knows, is no fan of Enron, in a reading of those internal Enron e-mails relating to this C66 issue, it seems very clear that Enron discovered it itself and approached ISO about it.

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And I'm not aware of any other market participant that was as on top of changes in the market as Enron was, I believe, for not so good reasons, of course, or their intentions were not so good. That these e-mails seem to confirm that a posting on the website, as ISO has claimed, and we will hear from them shortly, certainly didn't educate Enron on what was going on until Enron discovered it themselves and directly approached ISO about it.

My observations in reading those handful of Enron e-mails that we have made available.

Any questions from the dais? Seeing none, John. ISO, anybody want to respond? There they are in

01-21-03. TXT 13 force. John, we're going to have to ask you to step down, since we have limited room here, but ask that you stay within ear shot. In fact, John, that desk right behind Charlie 14 15 16 is a good one, because then if we seek your input during the 17 18 ISO's comments, we've got you readily at hand. Identify yourselves, please.

MR. BIBB: Yes. My name is Tracy Bibb. 19 MR. BIBB: Yes. My name is Tracy Bibb.

Director of Scheduling at the California ISO.

MR. DETMERS: And my name is Jim Detmers, 20 I'm the 21 22 23 I'm the vice President of Grid Operations for D-e-t-m-e-r-s. 24 the ISO. 25 [Thereupon the two witnesses, TRACY BIBB and JIM DETMERS, 26 27 swore to tell the truth, the 28 whole truth, and nothing but 0080 01 the truth. CHAIRMAN DUNN: Charlie, how do you want to handle it? Do you want Tracy to run.

MR. ROBINSON: I thought what I would do is, 02 03 04 first of all, address some of the procedural aspects that were 05 06 referenced by Chris. And then we would go through a technical 07 explanation of what we were doing with respect to C66 and the 80 transfer limitation. 09 What I wanted to say is that --CHAIRMAN DUNN: Charlie, I'm sorry, I don't mean 10 11 to interrupt. 12 Just for Tracy and Jim, the same caution I gave to John as well. As much as you can put it in first grade language, we're happier folks up here. 13 14 15 Charl i e. 16 MR. ROBINSON: I wanted to respond to the notion 17 that we had secretly introduced the protocol, or that we had 18 something to hide, which I think in some ways is probably the 19 most alarming information that you've received. The protocol that we invoked was actually a 20 21 protocol that's not secretly introduced in December of 2000. 22 fact, it was part of the original tariff filed by the ISO. And indeed, it was part of a FERC proceeding, so it was not secretly 23 24 introduced. 25 The second point is that this whole issue, the CBM issue, was the subject of a lawsuit at FERC by Morgan 26 Stanley filed in June, 2001, in which there were a ton of 27 interveners, including all of the California munis, PG&E, and 28 0081 Edison. Lots of discovery took place in that lawsuit.

It was recently withdrawn by the complaining 01 02 party, Morgan Stanley, after we persuaded them, as we hope to do 03 this afternoon with you, that we were properly using the 04 05 transfer limitation. 06 But my point here is that clearly we were not trying to hide anything with respect to the various discovery efforts by this Committee. If we were trying to keep something 07 80 secret, we were clearly pretty unsuccessful because it was part of a FERC procedure for 18 months, which covered the entire period of time during which this Committee has been seeking 10 11 12 di scovery. CHAIRMAN DUNN: Charlie, I think, as you know, 13 14

old ground for you and I, or the Committee and your office, and folks at ISO.

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We've had good times in the respective relationship between the ISO and the Committee, and some not so good times.

Trying to get the access to this data, as you

know, was probably if not the top, near the top of our list of frustrations which we just could never ever understand. I'm not -- debating it today is not going to help us at all. It was all of my letters to you over the time when we felt we weren't getting the data. It was frustrating beyond any point we had had before.

That, of course, you know in the legal world, raised our suspicions about C66. $_$

As to the original institution of it, and the

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> position that ISO maintains that, "We weren't hiding anything from anybody, " I understand the statements, I understand the explanation the ISO's provided, and I suspect Jim and Tracy will touch upon it.

> But the fact that no other market participant figured it out until later on is mind-boggling, when those folks are some of the most sophisticated business folks I've ever encountered in their understanding of their own market that they operated in, particularly the involvement of folks like ISO or FERC, et cetera. unexpl ai nabl e. That's something to me that just is

MR. ROBINSON: Well, I think you may be assuming some facts not in evidence.

CHAIRMAN DUNN: Probably true. Was it Gary Ackerman who accused me of being the master of hearsay? I think he was the one.

MR. ROBINSON: In regard to the way that it was publicly disclosed, you are quite correct that we did not identify this particular transfer limitation as perhaps we should have at the time.

What we did do, and what we had always done, was describe transfer limitations in the aggregate. So, on December 30, when this was first imposed, the degree of the transfer limitation was disclosed to the entire market place.

Essentially what was not disclosed, we did not disaggregate that information. In other words, we said, "This is the transfer limitation on the line." We did not disaggregate it in order to show that some of it represented

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existing transmission contracts, some of it represented what has been called a CBM

But the bottom line is, we published on our website the information that we thought was relevant.

When we began getting questions about it, then we disaggregated the information in response to the questions.

One of the reasons why I think that you may be assuming facts not in evidence is because this is something that when questions were raised, we would simply respond to the

questions openly and honestly.

There is a suggestion that Enron had somehow received a secret briefing. I don't see anything in the documents that we've received from the Committee that suggest that Enron received any kind of unique briefing. What I see someone making a telephone call and asking the reason for a larger transfer limitation than they were accustomed to Of course, they were able to determine that from the publicly disclosed information that was on the website. And of course, the person who answered the phone responded to the question.

I don't know to what extent other people asked the question, received the same answer, and went on.

So, I suggest you may be assuming too much when you say, "I don't understand why it is that Enron was the only person in the world who figured this out."

For all I know, there may have been many people

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      who telephoned, based upon the information that was publicly
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      available, asked the same question, and then went on.
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                          And of course we know there are several people
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      who figured it out.
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                          CHAIRMAN DUNN:
                                             Morgan Stanley.
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                         MR. ROBINSON:
                                             Morgan Stanley, who went and filed
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      a lawsuit.
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                          CHAIRMAN DUNN: I don't think our suggestion was
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      that Enron was the only one who figured it out.
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                          But these were some of the first internal market
      participant documents that suggested that they, a market participant, presumably others, had to reach out affirmatively
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      to ISO for further explanation.
I understand that's not unusual in the operation
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      of something as sophisticated as the market. But let me ask, if
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      I can, Charlie, a very specific question.
                          Was there an intentional -- was the decision not
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      to disaggregate the information around December 30th intentional?
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                         MR. ROBINSON: I don't think so. I think we
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      simply posted the transfer limitation with all of the other
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      transfer limitations.
                                   I do not believe that it was
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      intentional, that there was an intent to hide the ball, so to
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                         But I think you have hit upon the central point
      that I would like to make on this particular issue. And that
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      is, it is not that we failed to disclose the information.
      the level of disclosure. We did disclose the transfer limitation. We probably should have done a better job in terms
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      of disaggregating the information so that it was more readily
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      available to people.
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                         CHAIRMAN DUNN: We're back to transparency again.
     Anything further, Charlie?

MR. ROBINSON: The only other point that I would make, and I won't belabor it because I know that time is passing, I believe part of the difficulty that you experienced in the discovery on this issue was part of a misunderstanding.

The original request coming from the Committee called for schedules. This is not something that appears on a
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      called for schedules. This is not something that appears on a schedule. A transfer limitation is something that's imposed by
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      the ISO. It's not something that appears on a schedule.
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      It took us several months, frankly, to understand precisely what it is that you were looking for. Your original
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      letter in June essentially said, "Give us everything you own,"
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      and it took us several months to try to understand what exactly is it that you're looking for.
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                         Once we understood that, and I believe it
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      occurred during a conference call in September, at that point we
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      said, "Oh, well, it's not the schedules you're looking for.
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      What you want to know about are the transfer limitations and the
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      existing transmission contracts. And sure, we can certainly give you the information on those aspects because that's what
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      you're going to need in order to figure out this issue that
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      you've just described to us. '
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                         So, I do believe part of the difficulty arose out
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So, I do believe part of the difficulty arose out of a misunderstanding of exactly what it was that you were studying, and what it was that you were seeking. And once we understood what it was, then we volunteered to provide you the

information that, frankly, you had not requested before. CHAIRMAN DUNN: Senator Morrow.

SENATOR MORROW: Before you move on, so I can

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01-21-03. TXT 05 Are you saying, Mr. Robinson, that the ISO's position with respect to when C66 was implemented, which was 06 07 what? MR. ROBINSON: December of 2000. SENATOR MORROW: That at that period of time it 80 09 10 was a prevailing belief at the ISO that that was common knowledge within the energy industry, that C66 existed?

MR. ROBINSON: What I'm saying is that the 11 12 protocol was something that was in existence from start-up. invocation of the protocol was reflected in some aggregate 13 0ur 14 information that we publicized. 15 We probably should have disaggregated that information. But from what I know, I do not know of any deliberate intent to hide the ball by aggregating the 16 17 18 information in the way that we did. 19 I understand that. SENATOŘ MORROW: 20 But what I think I'm hearing from you, too, is 21 22 that nobody at the ISO concluded that it is a matter of general knowledge, that everybody knows about it, and there's no need to do anything further? 23 24 25 MR. ROBINSON: I guess what I would say is, the actual protocol was a part of the ISO tariff from start-up and 27 should have been public knowledge. 28 And the transfer limitation was identified on an 0087 01 aggregated basis, and that should have been public knowledge. SENATOR MORROW: I understand that. 02 Let me go 03 one step further. Are you aware of any conversation with any persons from the ISO at any level regarding this issue as far as the degree of public disclosure of something like this? I mean, we're talking back December of 2000. 04 05 06 07 08 MR. ROBINSON: No. I'm not aware of any conversations of that type.

SENATOR MORROW: At some point you made a decision to disaggregate. When did that occur? 09 10 11 MR. ROBINSON: I don't know. MR. BIBB: It was posted on our website I believe 12 13 starting in November of 2001. 14 It was decided to disaggregate it long before 15 that, back in when Morgan Stanley first started questioning in 16 17 the FERC proceedings SENATOR MORROW: That was when? 18 MR. ROBINSON: The lawsuit was filed in June. 19 SENATOR MORROW: The decision to disaggregate was 20 21 made in June? 22 MR. BIBB: The discussion to disaggregate started 23 And then there was some programming that had to be in June. 24 done with the Oasis. That didn't, obviously, take two months to 25 26 But I think there was conversations, if I recall, on how to disaggregate it, how do we want to show it.
We clearly knew by then it was total public 27 28 0088 knowledge because of the proceedings that were ongoing at FERC with Stanley Morgan and all the intervenors that, in retrospect, 01 02 that everybody knew about it. The proceedings were public, and that the rush to post it maybe lost some urgency.

SENATOR MORROW: So, it sounds like there were no discussions at all as far as how to disclose, to what degree, 03 04 05

06 07 and how to disaggregate, until sometime on or after June of 80 2001?

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MR. BIBB: Yes. SENATOR MORROW:

SENATOR MORROW: And that was pursuant or as a result of the various lawsuits or a lawsuit; is that right?

MR. BIBB: I would say that that prompted it,

yes.

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SENATOR MORROW: Okay, thank you. MR. BIBB: What I would like to do is to use the white board here, and please, don't judge me on my artistic value here on the State of California, what it's going to look like.

I'd like to explain why it is we imposed a restriction on the COI in the northbound direction. All the factors that we looked at we believed were good reasons to impose a restriction.

I will be away from the microphone. I think if I speak loudly.

CHAIRMAN DUNN: Speak loudly. And if anybody in the back can't hear him, just raise your hand and I'll take note.

MR. BIBB: As I said, my artistic value for the

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24 25 State of California is a resemblance only for discussion.

The reason for C66, which is nothing more than a nomenclature given to our data base so it identifies this as a taking away of capacity, was to relieve congestion on Path 15. That was the driving factor of C66.

C66, and again, this Committee now knows, there's three lines that connect us with the Pacific Northwest. C66 was imposed on these three lines that make up the COI in a northbound direction only

MR. ŘOBINSON: California-Oregon Intertie. MR. BIBB: The California-Oregon Intertie.

At the time of this, we were in the midst of very limited supplies for various reasons. We had looked at, on December 30th, going into the new year, what it is that we had to do to unload Path 15.

Remember, we were in somewhat of a -- I won't call it a drought -- but a light water year we were just coming out of. The Northwest was in a light water year at the same time.

So, what we had looked at was, we were depleting our Northern California hydro supplies. They were getting very The rain season predictions were low at the end of December. for a light winter for 2000-2001.

We were also exceeding or starting to, at the end of 2000, we had maximized in some units all of our air credits in the run times on the combustion turbines in the northern part of the state.

So, looking forward, we were considering run

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times that we were going to have use in the northern part of the state to keep Path 15 unloaded based upon what had been previously happening here for the last several months.

And, of course, air credits. Those were some of the low imports from the Northwest because of the hydro situation going on there.

At the time, the load-versus-generation was out of balance in Northern California. There was more load than there was generation available at the time.

At this time also we were -- had delayed much -many of the maintenance on the generators in the beginning of the energy crisis to keep them on line as much as possible. We had delayed two to three months some of those units. Many -some of those units were having additional air resource hardware installed as they would meet the new air standards that were being put onto them in the early part of 2001.

So, we had more load than generation in the north. And of course in the south we had less load and more

19 generation. That's the situation, what was going on at this 20 time.

 The other thing at Path 15, there's several different parties competing for Path 15. One is the California ISO and those entities within California to deliver power from the South to the North for ISO use. There's also those who want to import energy from the South and the Southwest and deliver it up to the Northwest. So, you have two -- two competing parties here.

The question came up, why not impose it on Path

15? The way the market works is, we post these values the day before the day-ahead market runs, or two days in front of the operating day so that everybody has visibility of what's available to go on. By -- had we used Path 15 as the CBM or the restriction, then in the day-ahead markets, we would have restricted the amount of power scheduled to the NPR, the northern part of California.

We looked to the north. When we got to COI, we looked at imposing a restriction going north, keeping Path 15 fully open for scheduling in the day-ahead and the hour-ahead markets, allow all of the resources to schedule as much as we could to the north, here.

The other way that scheduled power to the north of California, Northern California, I'll just -- is the Pacific DC Intertie. That's another way that we can bring power. We would bring power up north on the DC, and then back down through the COI, which was not congested at the time. The only congestion that we had going was the Path 66 or the COI Intertie between northwestern California in the north bound direction.

So, at Path 15, loading was -- we were having all the problem with Path 15. Hydro was getting low. Our run

So, at Path 15, loading was -- we were having all the problem with Path 15. Hydro was getting low. Our run times, our air credits were being consumed because we're running the generation so heavily. Plus, we had another 1300 megawatts of generation coming off that had to be taken for installation of air devices for new -- to meet new air standards.

Looking at that happening in 2001, and knowing that if we couldn't keep Path 15 unloaded, if we ran all of our hydro out, used up most of our run time and our air credits in

early of 2001, come summer of 2001, the hydro would, you know, be less than what we would normally have. The run times would be approaching their levels of their limits, and the air credits would be deleted before the end of the year of 2001. That was our reasoning.

So, we imposed a restriction in the northbound direction to Path 15, unloaded to get as much resources into MT-15 as possible.

At no time was the -- or was this C66 imposed to stop any type of laundering. That was never the intention or the discussion.

Questi ons.

ČHAIRMAN DUNN: Have you finished at the board? If you are, we'll bring you back down here. It'll be easier for everybody as far as hearing and so forth.

Chri s.

MR. SCHREIBER: I guess I would just say that that runs counter to the explanation I was initially given.

If that's changed, that's fine. But megawatt laundering was cited to me as one of the reasons, or the reason, why the flow of power north needed to be stopped.

SENATOR MORROW: By whom?

 $$\operatorname{MR}.$$ SCHREIBER: In my last conference call with the ISO on this matter.

SENATOR MORROW: With whom?

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MR. SCHREIBER:
                                         Yeah, it would be with a team of
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     operators and legal counsel there.
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                       And I said, why are we trying to stem the flow of
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     megawatts outside the state? And I was told, well, megawatts
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     were leaving the state because of megawatt laundering.
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                        SENATOR MORROW:
                                          I take it nobody that's sitting
     at the table when you were having this conversation -- CHAIRMAN DUNN: Sitting at the table?

MR. ROBINSON: I'm not familiar with this
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     conversation.
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                       MR. BIBB: There was one meeting that I was in.
     Was I present at that meeting on the phone? This was several
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     months back.
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                        CHAIRMAN DUNN: Now we are to the point where we
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     have to name names.
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                       MR. SCHREIBER:
                                          This was in October. I believe
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     it was October 26th, or thereabouts, of 2002. It was a
     conference call in which the revelation was made -- Dr.
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     Hildebrandt was actually on the call and actually finally
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     explained what took place.
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                       There was a whole host of people from the ISO on
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     the call as well.
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                        And Robert was on the call, Robert McCullough.
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     John, I don't think you were on the call when it was finally
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     di scovered.
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     But the question was posed, why are we limiting -- you know, once we discovered that what CBM was, and that the
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     available transmission capacity had been limited leaving the
     state, the flow of megawatts out of the state because of ricochet or megawatt laundering was specifically cited.

SENATOR MORROW: I'm sorry. Who from the ISO was
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     on the call?
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                       MR. SCHREIBER: I know Dr. Hildebrandt was, Beth
     Ann, you were on the call, Beth Ann Burns from their legal team, and Tracy.
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                        MR. BIBB: Okay, I guess I was -- that was the
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     conversation I was in also.
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                       MR. SCHREIBER:
                                         I make no representation that
     it's accurate, you know, that the reason is accurate.
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                                                                      But that
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     was the representation that was made in the call.
                       If it's changed, that's fine.
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                       CHAIRMAN DUNN: Other questions? SENATOR MORROW: I'm baffled.
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                       MR. BIBB: Maybe I could explain a little bit
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     more.
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                       At that time in the state we also were monitoring
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     the schedules coming south. I've heard comments made today
     about the exchange energy and such, that that may have hampered
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              I don't -- from what we looked at as we monitored
     schedules coming back into California from the Northwest, the
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     numbers when you look at them didn't change a whole lot from previous levels before C66. So, I'm not sure what the exchange
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     part is all about.
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                        I know there are exchange contracts. Those are --
     the ones that I'm familiar with are seasonal. We ship power to
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     Bonneville in the winter, some winter months, and they send it back. I don't know if those are still in force or not, but they
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     were at one point.
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                       So, other than some short-term power deals that
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     may have been made to do some exchange energy, those may have
     been done by maybe people with existing contracts even on the COI, because by implementing the CBM as we -- the term that we
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use, for Path 15, the argument, you know, could be made that maybe a TRM was more appropriate. We would have done the same thing had we called it a TRM, or had we called it -SENATOR MORROW: Explanation of TRM?

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MR. BIBB: I'm sorry. A TRM, a Transmission Reliability Margin is also another term and another tool that NERC and WECC has for utilities to take care of transfer or reliability issues on their system that they cannot deal with in a normal manner. Obviously, this would be one of those cases.

We discussed, should it be a TRM, should it be a

CBM, or should we just call it Dispatch Protocol 6.9.1 out of our tariff. It didn't matter what we called it. The amount of megawatts applied on the taking away from the capacity would have stayed the same.

So, it's been sometime has passed, but CBM was the nomenclature elected because we were reserving or trying to make capacity for our benefit for Northern California.

MR. ROBINSON: And I just wanted to make sure that the Committee had in front of it the dispatch protocol that we've cited. I believe it is quoted in the report prepared by McCullough Research. It's on the fourth page of the McCullough report. It is Dispatch Protocol 6.9.1 which does allow the ISO to impose transfer limitations to relieve grid congestion, mitigate potential overloads, or eliminate operation outside of existing nomogram criteria.

To summarize, I believe what Mr. Bibb has indicated is that we imposed the limitation on Path 66 in order to relieve anticipated congestion on Path 15, and potential

overloads on that path.

So, we do believe that it falls within the dispatch protocol, which, as I indicated before, was a part of the ISO tariff from startup.

CHAIRMAN DUNN: Tracy, I'm assuming you were the main contact person within ISO that orchestrated the C66 issue. Was that a fair description?

MR. BIBB: I think I was part of, you know, a lot of discussions that went on as to how to unload Path 15 in the long run, and not use up and deplete resources so that they wouldn't be available in the summer.

But that was -- to say, you know, who always engaged in those kinds of discussions. It was in a director level; myself, as Director of Scheduling, the Director of Operations, Market Operations, a variety of people were involved with wanting to find out, you know, how do we relieve Path 15 from overloading.

And I may add, there is one other way to relieve Path 15 from overloads, and that's through voluntary or involuntary load reduction, and that was the last thing we wanted to do.

CHAIRMAN DUNN: Even though there was a team of folks you have just identified, Chris, let me pose the question to you anyways.

The response from the market participants, when

they had a full realization of what had occurred, was pretty extraordinary. I mean, obviously Morgan Stanley initiates action over it. Charlie, you even mentioned before, there are numerous intervenors in that particular action. They obviously were not pleased by what had occurred.

Charlie, you said recently the Morgan Stanley action had been withdrawn.

MR. ROBINSON: Correct.

What's recently? December of 2002. CHAIRMAN DUNN: MR. ROBINSON:

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CHAIRMAN DUNN:
                                            So about a month ago, within a
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     month or so.
                        CHAIRMAN DUNN: So. year-and
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                                           So, that litigation went on for
      approximately a year-and-a-half.
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                         MR. ROBINSON: Correct.
     CHAIRMAN DUNN: Why do you think, Tracy -- and I know we're speculating; you're not the market participants -- why do you think their response was so vehement when they had a
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      full realization of what had occurred by mid '01?
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                        MR. BIBB: I believe they wanted access to the
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                    And that's the only thing I can come up with. CHAIRMAN DUNN: Charlie, any thoughts?
      Northwest.
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                        MR. ROBINSON: None further than that.
MR. SCHREIBER: Mr. Chair, I would propose this
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      to you as well, because I don't know answer to that, but I think
      part of the reason for their reaction might be because it was
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      unusual for this practice, for CBM to have been invoked on an
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      export power line as opposed to an import power line.
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                         I mean, the more customary utility practice would
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      have been to invoke the protocol on the import side of the
     business, not the export side. And though there's no distinction made in the tariff, 6.9.1, between import and export, I think it was the view of Enron in those memos, and
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      others that we've spoken to that the -- that it was a legal
      stretch to extend the protocol to an import.
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                         And I don't make any claim that that's a legal
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      argument.
                         CHAIRMAN DUNN: Charlie, let me go to the
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      settlement for a moment.
      Again, just taking your words in your opening comments that once there was a dialogue established and a fuller
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      understanding from ISO's perspective by Morgan Stanley and
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      others, that action was withdrawn.
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                        A year-and-a-half is a long time to litigate
      something over a misunderstanding. Can you give us more specifics about what was it that culminated in the settlement or
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      withdrawal of the action by Morgan Stanley with the various
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      intervenors?
                         MR. ROBINSON: I really can't. I was not the
      attorney at the ISO who managed the litigation on day-to-day
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               It was handled by our outside attorneys, and someone in
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      my department oversaw the day-to-day responsibilities.
                        CHAIRMAN DUNN: Which outside firm handled it?
MR. ROBINSON: The Swidler Berlin firm.
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                         CHAIRMAN DUNN: My favorite.
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                         MR. ROBINSON: By the way, I'm not sure it's that
      unusual for litigation to last a while at FERC.
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                         CHAIRMAN DUNN: I understand that, but I'm not so
      sure Morgan Stanley wanted to continue to pay their outside counsel over a mere misunderstanding, Charlie, to be perfectly
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      honest with you.
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                         Other comments from ISO on the C66?
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                         MR. BIBB: I think my last comment would be that
      starting in April, I don't know the exact timeframe, but it was late spring, I believe, the CBM was reduced on a daily basis in
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      the forward markets. And more transmission was released to new
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      firm use as new generation got on line. Generators returned
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      from their overhaul maintenance schedules, and the winter -- the
     water situation was starting to improve somewhat, and Path 15 overloads were becoming less frequent.
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                         We then started -- and again, I believe it was
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      around the April timeframe -- where we started releasing
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01-21-03. TXT 18 additional transmission for use by the market participants. CHAIRMAN DUNN: Okay, all right.
Other comments? Mr. Drivon?
Bear in mind that I am being called. 19 20 21 When C66 was being used, if somebody 22 MR. DRI VON: 23 didn't understand the source of the transmission withdrawal, would that appear to the market as congestion on that line? 24 25 MR. BIBB: On our Oasis, it would be posted as **26** zero -- or new firm use availability. 27 MR. DRIVON: Congestion would be the same way; 28 wouldn't it? 0100 01 MR. BIBB: Well, congestion occurs after people 02 start to use the line. MR. DRIVON: Or they could not use it because 03 somebody said it was already full. 04 05 MR. BIBB: That's right. And purpose for putting the zero new firm use during that period was not to have -- to 06 give a clear signal to the markets that this line was not 07 available in the south to north direction. 80 MR. DRIVON: So, they didn't need to try to use it to find out it wasn't available. You told them ahead of 09 10 time; right? 11 MR. ROBINSON: That's right. So, I don't think there was confusion about whether it was congestion. They were advised in advance what the transfer limitation capabilities of 12 13 14 15 that line were, and what the restrictions were. And I don't 16 believe they would have thought that it was congestion due to 17 market use. 18 MR. DRIVON: And so, if they tried to schedule 19 into that line then, nobody was going to be paid any congestion 20 mitigation money? 21 MR. DETMERS: That really depends on what the 22 total schedules are that you're seeing, and what direction those schedules are actually occurring.

MR. DRIVON: Well, if that line is said to be full, and I wanted to schedule into that line, could I create a 23 24 25 26 situation in which there would be congestion created that would 27 be paid for by somebody? 28 MR. DETMERS: You could definitely create 0101 congestion at that point, and it would have to be paid for by those who are scheduling or utilizing that facility. 01 02 MR. ROBINSON: In the same way as if there were 03 no transfer limitation on the line, people can schedule more 04 than the rated capacity of the line. 05 06 MR. DRIVON: And there's a rumor that that 07 happened. 08 MR. ROBINSON: There is indeed. MR. DRIVON: And I think you said that the 09 10 justification for C66 was light water in the Northwest and Northern California affecting hydro availability, at least 11 perspectively, and generation capacity restrictions due to, for instance, run time problems and air credit.

Is that right? 12 13 14 MR. BIBB: That, coupled with the fact that the Path 15 was being -- or wanted to be used by a lot of different 15 16 17 entities for different purposes, some for serving load in Northern California, some for transporting outside of 18 19 Cal i forni a.

MR. DRIVON: What part of your forecasting involved your consideration of physical withholding that I think, if I remember correctly, Mr. Detmers talked about had occurred during the second half of 2000?

I mean, I think we've had testimony here at the

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Committee, and I think by Mr. Detmers, that the ISO had
    identified physical withholding on the part of a number of
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    generators during the second half of 2000.
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                    What part of your thinking concerning your
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01 forecast did that consider?

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I don't know if that was a part of MR. DETMERS: any of our determination to impose the CBM, or what we term as the CBM

MR. DRIVON: Well, it just seemed to me that if you were looking at a situation where there was short supply over the past six months, and you ascribe light water in the Northwest and Northern California. Therefore, less available hydro forecast, generation capacity restrictions due to run time and air credits, and et cetera, that if you had already identified that there had been significant withholding, that if that could have been corrected, that might have obviated the necessity to forecast these kinds of shortages into 2001.

MR. DETMERS: If that had been determined.

But what I'm saying is, I don't know that we were drawing those conclusions at that time when we were making the decisions to impose that.

MR. DRIVON: I thought that that had been your testimony here. That in the time leading up to the December 8th FERC filing to eliminate the hard caps, that you were sweating bullets down there because you didn't have enough electricity to And in looking at it, it was your determination that go around. it was probably substantially due to physical withholding.

Isn't that what you testified to?
MR. DETMERS: I am not sure exactly what that

testimony was.

We do know that -- that we did have a shortage of supply, and a lack of people wanting to do business with the 0103

ISO or sell to the ISO.

And so, from that standpoint, we did have a shortage condition which -- I don't know if the terms were used as a physical withholding

MR. ROBINŠON: I did want to point out that we were addressing the physical withholding point in other arenas.

You may recall that we requested that the Secretary of Energy give us an order that allowed us to force generators, both inside and outside the state, to continue supplying California. After those orders expired, the ISO went into court and obtain a federal court injunction to keep people

generating and delivering to California.

So, we did address the issue of physical withholding until we were turned back by the Court of Appeal s.

MR. DRIVON: I know you did a lot to try to address that particular problem.

As a matter of fact, I think I remember reading Mr. Detmers' declaration in support of the FERC -- of the application to FERC to eliminate the hard price caps, talking about the fact that there was physical withholding. I think

that was actually part of a sworn declaration. What I'm wondering is, if physical withholding had affected the availability of power, why didn't that figure into the calculations concerning these forecasts going forward that you use now to justify C66?

What I'm saying is, my mind's not MR. DETMERS: as good as two years ago when those events all occurred. So, I

don't -- I don't know that I can recall that. We can go back to the documents and they speak for themselves.

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CHAIRMAN DUNN: Larry, one more question and
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      we've got a certain President Pro Tem.
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                           MR. DRIVON:
                                          In the face of the President Pro
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      Tem.
                          CHAIRMAN DUNN: His level of patience is
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                      I think I don't need to say anything further.
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      notori ous.
      \begin{array}{c} \text{Charlie, unfortunately because of time, and I} \\ \text{know there are other folks from ISO, and I know from CERS are} \end{array}
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      here as well, too, and we have not reached that point yet. just conferred with Senator Morrow.
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                           Because Floor Session, et cetera, we're not going
      to be able to bring everybody back later today. We want to
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      complete these issues, both this one, and I know Mr. Drivon and
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      others have some wrap-up questions, to do so, and also touch upon the fictitious load, the issue of Perot Systems, et cetera,
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      that are on the agenda, MDO2. And I know on MDO2, we've got
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      some timelines as well. So, we're going to reschedule as
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      quickly as possible.
      Please accept my humble apologies, Zora in particular, because I know you've been here a long time. We will work with everybody's schedule to make it as convenient as
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      possible, since everybody cleared their schedule to get here,
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      and now we've got to come to an end.
      So, again, my humble apologies. I thank everybody for being here as long as you have already today. We'll reschedule with everybody's schedule.
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                           Unless there's anything further, a certain
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      Senator is calling, and we're adjourned.
                          [Thereupon this portion of the Senate Select Committee hearing
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      CERTIFICATE OF SHORTHAND REPORTER
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                     I, EVELYN J. MIZAK, a Shorthand Reporter of the State
      of California, do hereby certify:
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                     That I am a disinterested person herein; that the
      foregoing transcript of the hearing of the Senate Select
Committee to Investigate Price Manipulation on the Wholesale
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Energy Market was reported verbatim in shorthand by me, Evelyn J. Mizak, and thereafter transcribed into typewriting.

10 11 12	O1-21-03. TXT I further certify that I am not of counsel or attorney for any of the parties to said hearing, nor in any way interested in the outcome of said hearing.
13	IN WITNESS WHEREOF, I have hereunto set my hand this
14	day of, 2003.
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19	EVELYN J. MIZAK
20	Shorthand Reporter
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